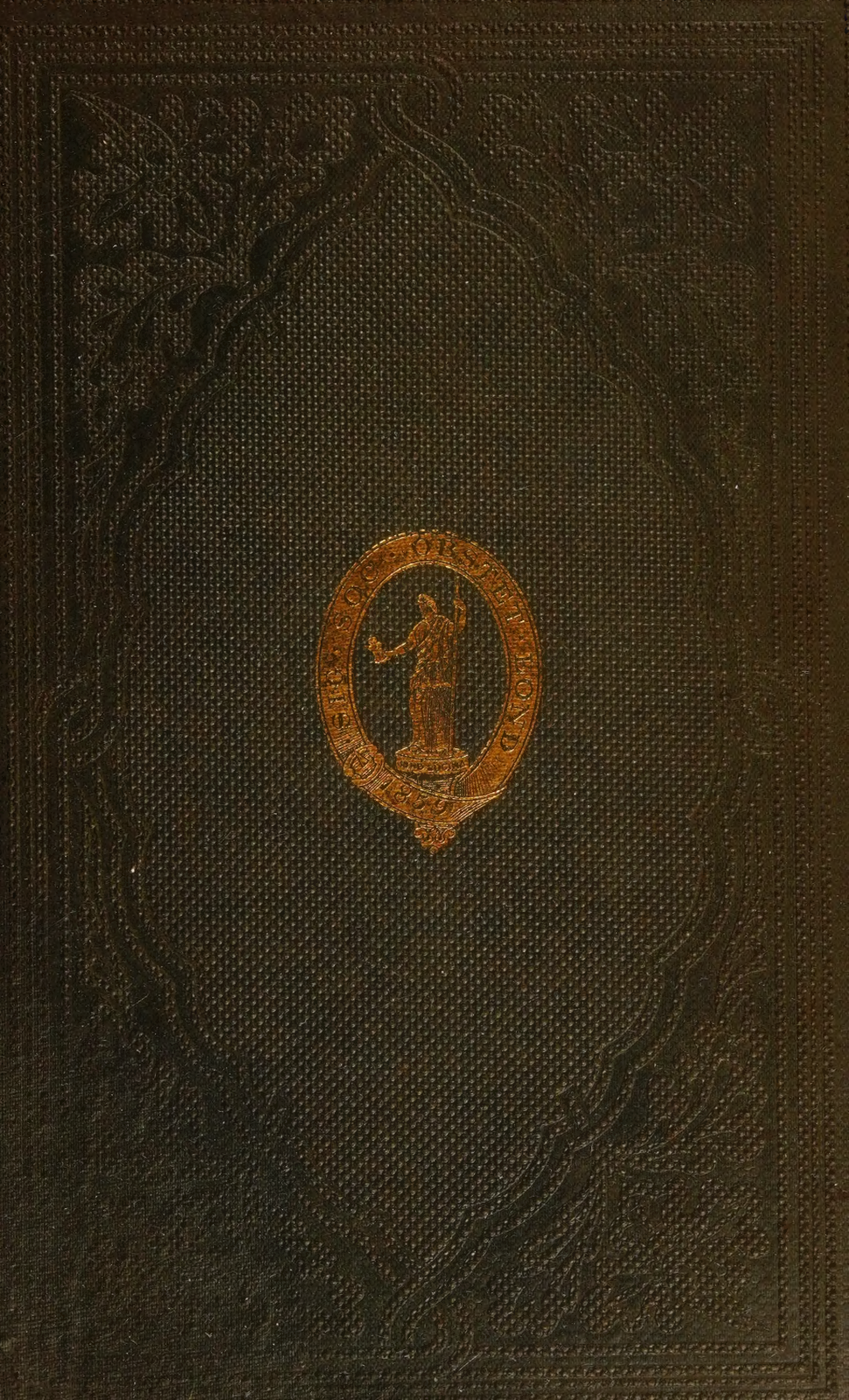
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OBSTETRICAL TRANSACTIONS.

VOL. XII.

TRANSACTIONS

OF THE

OBSTETRICAL SOCIETY

OF

LONDON.

VOL. XII.

FOR THE YEAR 1870.

WITH A LIST OF OFFICERS, FELLOWS, ETC.

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1871.

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OBSTETRICAL SOCIETY OF LONDON.

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1861 WILLIAM TYLER SMITH, M.D.
1863 HENRY OLDHAM, M.D.
1865 ROBERT BARNES, M.D.
1867 JOHN HALL DAVIS, M.D.
1869 GRAILY HEWITT, M.D.

REFEREES OF PAPERS FOR THE YEAR 1871

APPOINTED BY THE COUNCIL.

AVELING, JAMES H., M.D., Rochester.
BERRY, SAMUEL, Esq., F.R.C.S., Birmingham.
CHAMBERS, THOMAS, Esq.
CHAVASSE, PYE HENRY, Esq., F.R.C.S., Birmingham.
CLAY, CHARLES, M.D., Manchester.
DRAGE, CHARLES, M.D., Hatfield.
DRUITT, ROBERT, M.R.C.P.
DRUITT, WILLIAM, Esq., F.R.C.S., Wimborne.
ELLISON, JAMES, M.D., Windsor.
FOWLER, JAMES, Esq., Wakefield.
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MARCH, HENRY COLLEY, M.D., Rochdale.
NEWTON, EDWARD, Esq., F.R.C.S.
RADFORD, THOMAS, M.D., Manchester.
RANDALL, JOHN, M.D.
ROUTH, CHARLES H. F., M.D.
SMITH, HEYWOOD, M.B. Oxon.
SQUIRE, WILLIAM, Esq.
WALKER, THOMAS JAMES, M.D., Peterborough.
WOODMAN, WILLIAM BATHURST, M.D.

Elected

1870 West, Charles, M.D., F.R.C.P., Physician to the Hospital for Sick Children; 61, Wimpole street, Cavendish square.

FOREIGN SUBJECTS.

1863 Braun, Carl, M.D., Professor of Midwifery, Vienna.

1862 Channing, Walter, M.D., late Professor of Midwifery in the University of Cambridge, Boston, U.S.

1863 Depaul, Jean Anne Henri, M.D., Paris.

1862 Dubois, Baron Paul, late Professor of Clinical Midwifery in the Faculty of Medicine, Paris.

1863 Faye, F. C., Professor of Midwifery in the University of Christiania.

1864 Hecker, C., Munich.

1866 Hugenberger, Theodor, M.D., Professor at the Maternity of Her Imp. Highness Madame the Grand Duchess Helena Pawlowna, St. Petersburgh.

1866 Lazarewitch, J., Kharkoff, Russia.

1866 Lazzati, Pietro, Milan.

1863 Martin, Eduard, M.D., Director of the Institute for Clinical Midwifery at the University, Berlin.

1864 Pajot, Ch., M.D., Professor of Midwifery to the Faculty of Medicine, Paris.

1866 Rizzoli, Francesco, Bologna.

1862 Scanzoni, F. W. von, M.D., Professor of Midwifery, Würzburg.

1864 Sims, J. Marion, M.D., late Surgeon to the Women's Hospital, New York.

1866 Thomas, Abraham Everard Simon, Leyden.

1862 Virchow, Rudolf, M.D., Professor of Pathological Anatomy in the University of Berlin.

ORDINARY FELLOWS.

February, 1871.

Those marked thus (*) have paid the Composition Fee in lieu of further annual subscriptions.

Elected

1869 Adams, Thomas Rutherford, M.D., Surgeon to the Croydon General Hospital; 1, Ottoman villas, St. James's road, West Croydon.

1868 Adams, William, F.R.C.S., 37, Harrington square, N.W.

1859 Aldersey, William Hugh, M.B. Lond., F.R.C.S., South Hayling Island, Havant, Hants.

1861 Aldridge, John Petty, M.D., Shirley House, Dorchester.

1859 Amsden, George John, M.D., 85, St. Paul's road, Highbury, N.

1866 Andrews, Henry Charles, M.D., 1, Oakley square, N.W.

1859 Andrews, James, M.D., 149, Camden road, N.W.

1870 Appleton, Robert Carlisle, Toll Garel, Beverley.

1859 Archer, John, F.R.C.S., 9, Carpenter road, Edgbaston, Birmingham.

1861 Armstrong, John, M.D., Gravesend, Kent.

1870 Atkinson, Frederick P., M.D., Heath villa, Bushey Heath, Herts.

1869 Aveling, Charles Taylor, M.B. Lond., F.R.C.S., 93, High street, Homerton, N.E.

1859 Aveling, James H., M.D., Consulting Surgeon to the Sheffield Hospital for Women; Boley Hill, Rochester, Kent. *Council*, 1865-66.

Elected

1859 AYLING, WILLIAM HENRY, L.R.C.P. Ed., 103, Great Portland street, W.

1864 BAKER, G. BENSON, 42, Grove road, St. John's wood, N.W.

1867 BAKER, JOHN C., M.D., F.R.C.S. Ed.; 132, Duke street, Liverpool.

1859 BAKER, JOHN WRIGHT, Surgeon to the Derbyshire General Infirmary; 102, Friar gate, Derby.

1859 BALLARD, THOMAS, M.D., 10, Southwick place, Hyde Park, W.

1859 BANNISTER, JOHN HENRY, 436, Oxford street, W.

1869 BANTOCK, GEORGE GRANVILLE, M.D., 44, Cornwall road, Westbourne park, W.

1863 BARKER, EDWARD, F.R.C.S., Senior Surgeon to the Melbourne Hospital, Victoria.

1859 BARNES, ROBERT, M.D., F.R.C.P., Obstetric Physician to, and Lecturer on Midwifery at, St. Thomas's Hospital; Physician to the Royal Maternity Charity; 31, Grosvenor street, W. *Vice-Pres.* 1859-60. *Council*, 1861-62, 1867-71. *Treas.* 1863-64. *Pres.* 1865-66.

1863 BARRATT, JOSEPH G., M.D., 8, Cleveland gardens, Bayswater, W.

1861* BARTRUM, JOHN S., F.R.C.S., Surgeon to the Bath General Hospital; 41, Gay street, Bath. *Hon. Loc. Sec.*

1867 BASAN, HORACE, L.R.C.P. Ed., Prebyn, Bedford.

1866 BASSETT, JOHN, Professor of Midwifery at the Queen's College, Birmingham; 144, Hockley Hill, Birmingham.

1870 BATELY, JOHN, South town, Great Yarmouth, Norfolk.

1859 BATEMAN, HENRY, F.R.C.S., 32, Compton terrace, Canonbury, Islington, N.

1867 BATTEN, RAYNER W., M.D., Physician to the Gloucester General Infirmary; 1, Brunswick square, Gloucester.

1859 BATTYE, RICHARD F., M.R.C.P. Ed., 6, Gloucester street, Belgrave road, Pimlico, S.W.

1871 BEACH, FLETCHER, 13, Kilburn Park road, N.W.

1859 BECK, T. SNOW, M.D., F.R.S., 71, Portland place, W.

Elected

1868 BEIGEL, HERMANN, M.D., Physician for the Department of Skin Disease at Charing Cross Hospital, Physician to the Metropolitan Free Hospital; 39, Queen's road, Brownswood Park, N.

1866 BELCHER, HENRY, M.D., L.R.C.P. Ed.; 10, Pavilion parade, Brighton.

1867 BENNET, WILLIAM FORD, 179, Clarendon road, Notting hill, W.

1859 BERRY, SAMUEL, F.R.C.S., Consulting Surgeon-Accoucheur to the Queen's Hospital, and Professor of Midwifery and the Diseases of Women and Children in the Queen's College; Hatfield House, 281, Hagley road, Edgbaston, Birmingham. *Vice-Pres.* 1859. *Hon. Loc. Sec.*

1859 BILLINGHURST, HENRY, M.D., Hundalee, Widmore lane, Bromley, Kent.

1859 BIRD, FREDERIC, M.D., Obstetric Physician to, and Lecturer on Midwifery and Diseases of Women at, the Westminster Hospital, Senior Physician to the Westminster Maternity Charity; 13, Grosvenor street, W. *Council*, 1859.

1868 BLACK, JAMES WATT, M.D., Obstetric Physician to the Charing Cross Hospital; 15, Clarges street, Piccadilly, W.

1859 BLACKSTONE, JOSEPH, Park House, Gloucester road, Regent's park, N.W.

1868 BLAIR, JOHN, Collins street east, Melbourne, Victoria.

1861* BLAKE, THOMAS WILLIAM, Hurstbourne Tarrant, Andover, Hants.

1859 BLAKE, VALENTINE W., F.R C.S., Surgeon to the Birmingham and Midland Counties Lying-in Hospital; 6, Old square, Birmingham.

1866 BLEASE, THOMAS, Clairville, Altrincham, Cheshire.

1860 BLOOD, MICHAEL, 15, Portland place, St. Helier's, Jersey.

1859 BLOXAM, WILLIAM, M.D., 21, Mount street, Grosvenor square, W.

1868 BOGGS, ALEXANDER, M.D., late of H.M.'s Madras Army; 43, Marston street, Iffley road, Oxford.

Elected

1866 Boulton, Percy, M.D., 6, Seymour street, Portman square, W.

1868 Bousfield, Edward, L.R.C.P. Ed., Market place, Thetford, Norfolk.

1869 Boyd, Herbert, Assistant-Surgeon, Indian Army, Fort William, Calcutta [agents, Henry S. King and Co., 65, Cornhill].

1859 Brace, William Henry, M.D., 12, Eccleston square, S.W.

1862 Braithwaite, William, M.D., late Lecturer on Midwifery, Leeds School of Medicine; Clarendon House, Clarendon road, Leeds. *Council*, 1869–70.

1862 Brickwell, John, Sawbridgeworth, Herts.

1865 Bridgman, John Henry.

1864 Bright, John Meaburn, M.D., The Glen, Forest hill, Sydenham, S.E.

1869 Brisbane, James, M.D., 30, Lisson grove, N.W.

1860 Britton, William Samuel, 64, Acacia road, St. John's Wood, N.W.

1866 Brodie, George B., M.D., Physician to Queen Charlotte's Lying-in Hospital, 56, Curzon street, Mayfair, W.

1868 Brown, Andrew, L.R.C.P. Ed., Elton Villa, Bartholomew road, Kentish Town, N.W.

1865 Brown, David Dyce, M.A., M.D., 22, Union place, Aberdeen.

1866 Brown, George Dransfield, Henley Villa, Uxbridge road, Ealing, Middlesex.

1859 Brown, Richard, M.D., 1, Brunswick place, Brunswick square, Brighton.

1861 Brown, Samuel William, F.R.C.S., Lewisham, Kent.

1866 Brown, Thomas, M.D., 236, Kennington park road, S.E.

1865 Browne, J. Lennox, 41, Welbeck street, Cavendish square, W.

1865 Brunton, John, M.D., M.A., Surgeon to the Royal Maternity Charity, 207, Caledonian road, N. *Council*, 1871.

1866 Bryant, John Henry, 23a, Sussex square, Hyde park gardens, W.

Elected

1863 Bryant, Thomas, F.R.C.S., Assistant-Surgeon to Guy's Hospital; 2, Finsbury square, E.C. *Council*, 1866-67.

1859 Bryant, Walter John, F.R.C.S., L.R.C.P. Ed., 23A, Sussex square, Hyde park gardens, W. *Council*, 1859.

1870 Buck, Joseph Randle, L.R.C.P. Ed., Inkberrow, Redditch, Worcestershire.

1861 Bunny, Joseph, M.D., Hon. Surgeon to the Newbury Dispensary; Northbrook street, Newbury, Berks.

1870 Burdett, David E., M.B., Belleville, Ontario, Canada. *Hon. Loc. Sec.*

1867 Burnett, Charles, M.B., Biggleswade, Bedfordshire.

1866 Burrows, John Cordy, F.R.C.S., Consulting-Surgeon to the Brighton Hospital for Sick Children; 62, Old Steine, Brighton.

1862 Burton, John Moulden, F.R.C.S., Lee park Lodge, Lee, Kent, S.E. *Council*, 1868-69.

1870 Burzorjee, Burzorjee Dorabjee, Graduate of Grant Medical College, Bombay. *Hon. Loc. Sec.*

1864 Butler, Frederick John, M.D., Surgeon to Winchester College and St. Cross Hospital, and to the Hants County Hospital, Winchester.

1870 Butler, John M., M.D., Physician to the Royal Kent Dispensary, and to the Woolwich Dispensary, 28, Woolwich Common, S.E.

1868 Butler, William Harris, L.R.C.P. Ed., 15, Thomas street, Woolwich.

1868 Butt, William Frederick, 12, South street, Park lane, W.

1862 Campbell, Charles, M.D., Kingston, Jamaica. [Agent: Mr. Lewis, Gower street.]

1861 Candlish, Henry, M.D., Physician to the Alnwick Infirmary, Bondgate street, Alnwick, Northumberland.

1861 Candy, John, M.D., Assistant-Surgeon, H.M.'s 109th Regiment at Mooltan, India. [*Per* Messrs. Price and Boustead, Army Agents, 34, Craven street, Strand, W.C.]

1866 Carless, John, M.D., London road, Stroud, Gloucestershire.

Elected

1863 CARLYLE, DAVID, M.D., 2, Crescent, Carlisle.

1861 CARTER, ALBERT PLEYDELL, Wellington House, 43, London road, Gloucester.

1869 CASKIE, JOHN BOYD, M.D., 89, Goswell road, E.C.

1869 CASS, WILLIAM CUNNINGHAM, 20, St. George's road, S.W.

1865 CASSELS, THOMAS, M.D., 2, Upper Tachbrook street, Pimlico, S.W.

1870 CAUSTON, WILLIAM HENRY, Kingston-on-Thames.

1863 CAYZER, THOMAS, Mayfield, Aigburth, Liverpool.

1864 CHAMBERS, THOMAS, 2A, Sutherland street, Warwick square, S.W.

1859 CHANCE, EDWARD JOHN, F.R.C.S., Surgeon to the Metropolitan Free Hospital and City Orthopædic Hospital; 59, Old Broad street, City, E.C.

1862 CHAPMAN, WALTER, F.R.C.S., Lower Tooting, Surrey.

1867* CHARLES, T. EDMONSTOUNE, M.D., Professor of Midwifery at the Calcutta Medical College, 10, Harrington street, Calcutta, *Hon. Loc. Sec.*

1865* CHARLTON, EGBERT, M.D., 5, Albion place, Hyde park square, W.; and 1, Zingara terrace, Farnham, Surrey.

1866 CHATTAWAY, ALLEN G., The Villa, Kingsland, Leominster, Hereford.

1863 CHAVASSE, PYE HENRY, F.R.C.S., 12, The Square, Birmingham.

1868 CHILD, EDWIN, New Malden, Kingston-on-Thames, Surrey.

1861 CHURCH, WILLIAM JOHN, F.R.C.S., 22, Circus, Bath.

1859 CLAREMONT, CLAUDE CLARKE, Millbrook House, 1, Hampstead road, N.W.

1861 CLARK JAMES, M.D., 10, Rothwell street, Regent's park road, N.W.

1859 CLARK, JAMES FENN, 18, York terrace, Leamington. *Hon. Loc. Sec.*

1862 CLARKE, JOHN, Lynton, North Devon.

1859 CLAY, CHARLES, M.D., late Lecturer on Midwifery and Clinical Medicine in St. Mary's Hospital, Manchester; 101, Piccadilly, Manchester. *Council*, 1863-65.

Elected

1859 CLAY, JOHN, Professor of Midwifery, Queen's College, Birmingham; 95, Newhall street, Birmingham. *Council*, 1868-69.

1859 CLAYTON, OSCAR, F.R.C.S., Extra Surgeon-in-Ordinary to H.R.H. the Prince of Wales, and Surgeon-in-Ordinary to H.R.H. the Duke of Edinburgh, 5, Harley street, W.

1859 CLEVELAND, WILLIAM FREDERICK, M.D., Stuart Villa, 199, Maida vale, W. *Council*, 1863-64.

1861 CLOGG, STEPHEN, East Looe, Cornwall.

1865* COATES, CHARLES, M.D., Physician to the Bath United General Hospital; 10, Circus, Bath.

1868 COATES, FREDERICK T., 201, Euston road, N.W.

1860 COCKELL, EDGAR, Holly Lodge, Forest road, Dalston, N.E.

1859 COCKELL, FREDERICK EDGAR, 1, Alma villas, Dalston, N.E.

1861 COCKER, JOHN, M.D., F.R.C.P. Ed., Bank Hey, Blackpool, near Preston, Lancashire.

1861 COLLINGWOOD, WILLIAM, 15, St. Thomas street, Southwark, S.E.

1859 COLLINS, CHAMBERS, F.R.C.S., Maryport, Cumberland.

1866 COOMBS, JAMES, M.D., Bedford.

1864 COOPER, GEORGE HENRY C., M.D., Surgeon to the Holloway and N. Islington Dispensary; Surgeon-Accoucheur to the Royal Maternity Charity; 35, Compton terrace, Islington, N.

1861 COOPER, JOHN, M.R.C.P. Ed., Clapham rise, S.W.

1865 COPEMAN, EDWARD, M.D., Physician to the Norfolk and Norwich Hospital; Upper King street, Norwich, *Council*, 1869-71. *Hon. Loc. Sec.*

1866 CORNWALL, JAMES, F.R.C.S., Fairford, Gloucestershire.

1860 CORRY, THOMAS CHARLES STEUART, M.D., L.R.C.P. Ed., Senior Surgeon to the Belfast General Dispensary; 9, Clarendon place, Belfast. *Council*, 1867. *Hon. Loc. Sec.*

1859 CORY, FREDERICK CHARLES, M.D., Portland Villa, Buckhurst hill, Essex. *Council*, 1867-69.

1863 COWARD, JOHN W., Christchurch, Canterbury, New Zealand [agents: Messrs. Alfred Hill and Sons, 11, Little Britain].

Elected

1869 Cox, Richard, L.R.C.P. Ed., Theale, near Reading.

1869 Cox, William, St. Mary's Hospital, Paddington.

1870 Craigie, John, M.D., Reigate, Surrey.

1859 Croft, J. McGrigor A. T., M.D., M.R.C.P., 8, Abbey road, St. John's Wood, N.W.

1866 Croft, Robert Charles, L.R.C.P. Ed., 204, Camden road, N.W.

1861 Croskery, Hugh, L.R.C.S., Ireland; Chapelton, Jamaica [agents: Messrs. Burgoyne, Burbidges and Squire, 16, Coleman street, E.C.].

1860 Cross, Richard, M.D., 5, Queen street, Scarborough, Yorkshire.

1869 Cross, Robert Shackleford, Petersfield, Hants.

1867 Croucher, Henry, West Hill, Dartford, Kent.

1859 Culpeper, William Moe, 1, Brunswick Terrace, Palace gardens, Kensington, W.

1862 Cumberbatch, Laurence Trent, M.D., 25, Cadogan place, Belgrave square, S.W. *Council*, 1868-70.

1867 Cuolahan, Hugh, M.D., 9, Grange road, Bermondsey, S.E.

1859 Curgenven, J. Brendon, 11, Craven hill gardens, Bayswater, W. *Council*, 1870-71.

1868 Daly, Frederick Henry, M.D., 101, Queen's road, Dalston, N.E.

1870 Daniel, William Abbot, Kingston-on-Thames.

1859 Davis, John Hall, M.D., F.R.C.P., Obstetric Physician to, and Lecturer on Midwifery and Diseases of Women and Children at, the Middlesex Hospital; Physician to the Royal Maternity Charity; Consulting Physician-Accoucheur to the St. Pancras Infirmary; 24, Harley street, Cavendish square, W. *Council*, 1859, 1864-65, 1869-71. *Vice-Pres.* 1861-63. *Pres.* 1867-68.

1863 Davis, Robert Alex., M.D., L.R.C.P. Ed. (exam.), Resident Physician, County Asylum, Burntwood, near Lichfield, Stafford.

1859 Day, William Henry, M.D., Physician to the Samaritan Free Hospital, and to the Margaret street Dispensary; 10, Manchester square, W.

Elected

1866 DEANS, JOHN, The Elms, Crawley, Sussex.

1861 DE LA MOTTE, HENRY D. C., Swanage, Dorset.

1869 DEMPSEY, JOSEPH MALDON, M.D., 27, Charterhouse square, E.C.

1859 DENNY, JOHN, L.R.C.P. Ed., 1, Sumner terrace, Onslow square, Brompton, S.W.

1860 DICKENSON, JOHN, F.R.C.S., Hon. Surgeon to the Wrexham Infirmary; Wrexham, Denbighshire.

1859 DICKSON, JOSEPH, M.D., 56, Bath street, Jersey.

1859 DIXON, JOHN, M.D., 108, Grange road, Bermondsey, S.E.

1870 DODSWORTH, FREDERICK C., Junr., Oxford Villa, Turnham green, Middlesex, W.

1859 DRAGE, CHARLES, M.D., Hatfield, Herts. *Council*, 1861-64.

1859 DRUITT, ROBERT, M.R.C.P., 37, Hertford street, Mayfair, W. *Council*, 1859-1860. *Vice-Pres.* 1862-64.

1859 DRUITT, WILLIAM, F.R.C.S., Wimborne, Dorset.

1869 DUKE, BENJAMIN, 272, Kennington park road, S.E.

1859 DUNCAN, JAMES, M.B., 8, Henrietta st., Covent garden, W.C.

1859 DUNCAN, PETER CHARLES, M.D., 88, Gower street, W.C.

1867 DUNDERDALE, WILLIAM, M.D., Poulton Le Fylde, Lancashire.

1859 DUNN, ROBERT, F.R.C.S., 31, Norfolk street, Strand, W.C. *Council*, 1860. *Vice-Pres.* 1861-62.

1859* EASSON, JAMES, Stoke Pogis, Slough, Buckinghamshire.

1871 EASTES, GEORGE, M.B., F.R.C.S., 5, Albion place, Hyde park square, W.

1866 EASTON, JOHN, M.D., 20, Connaught square, Hyde park, W.

1867 EDIS, ARTHUR W., M.D., Assistant-Physician to the Hospital for Women, Soho square; 23, Sackville street, W.

1861 EDWARDS, THOMAS EDWIN, L.R.C.P. Lond.; 98, Gloucester crescent, Hyde park, W.

1866 ELLIOTT, ROBERT ARTHUR, the Staff-Surgeon, Curragh Camp, Divisional Staff Lines, Dublin.

1862 ELLIS, EDWARD, M.D., Physician to the Victoria Hospital for Children; 118, Warwick street, Belgravia, S.W.

1861 ELLIS, ROBERT, Obstetric Surgeon to the Chelsea, Brompton, and Belgrave Dispensary; 63, Sloane street, S.W. *Council*, 1868-70.

Elected

1862 ELLISON, JAMES, M.D., Surgeon to H.M.'s Household, Windsor; 14, High street, Windsor, Berks.

1870 EVANS, MAURICE G., M.D., Narberth, Pembrokeshire, S. Wales.

1865 FAIRBANK, THOMAS, M.D., Surgeon to H.M. the Queen and the Royal Household, Windsor Castle; Sheet street, Windsor, Berks.

1859 FAIRCLOTH, RICHARD, F.R.C.S., Newmarket, Cambridgeshire.

1867 FAIRLAND, EDWIN JAMES, L.R.C.P. Ed., Staff Assistant-Surgeon, 21st Hussars, Lucknow, Oude [*per* Horace E. Golding, Esq., Lincoln's Inn Fields].

1869 FARQUHAR, WILLIAM, M.D., Assistant-Surgeon, Madras Army Garrison, Bangalore, East Indies.

1861 FARR, GEO. F., L.R.C.P. Ed., 20, West square, Southwark, S.E.

1868 FEGAN, RICHARD, M.D., 1, Charlton Park terrace, Old Charlton, Kent.

1859 FERGUSSON, SIR WILLIAM, Bart., F.R.C.S., F.R.S., Sergeant Surgeon to H.M. the Queen, Professor of Surgery in King's College and Surgeon to King's College Hospital, Consulting Surgeon to the Samaritan Free Hospital; 16, George street, Hanover square, W. *Vice-Pres.* 1862-63.

1869 FERGUSSON, WILLIAM EDWARD LAING, M.D., 43, Claremont square, Pentonville, N.

1861 FETHERSTON, GERALD H., M.D., L.R.C.P. Ed.; Hon. Physician to the Melbourne Lying-in-Hospital, Prahran, Melbourne, Victoria. *Hon. Loc. Sec.*

1869 FISHER, C. HOLDRICH, M.D., Sittingbourne, Kent.

1870 FISHER, JOHN MOORE, M.D., 29, Norfolk street, Strand, W.C.

1868 FLETCHER, EDWARD, Lygon street, Carlton, Melbourne, Victoria.

1865 FOWLER, JAMES, F.S.A., Hon. Surgeon to the Clayton Hospital and Wakefield General Dispensary; 13, South Parade, Wakefield. *Hon. Loc. Sec.*

1866 FOX, CORNELIUS BENJAMIN, M.D., South Cliff, Scarborough.

Elected

1862 FRAIN, JOSEPH, M.D., Hon. Surgeon to the South Shields Dispensary, Frederick street, South Shields.

1861 FRANKLAND, THOMAS THRUSH, Surgeon to the Ripon Dispensary, Ripon, Yorkshire.

1867 FREEMAN, HENRY W., 38, Gay street, Bath.

1867 FRYER, CHARLES, L.K.Q.C.P. Ireland; 69, Rumford street, Chorlton-on-Medlock, Manchester.

1867 FULLER, CHARLES C., 29, Albany street, Regent's park, N.W.

1863 GARMAN, HENRY VINCENT, Kent House, Bow road, E.

1859 GASKOIN, GEORGE, 7, Westbourne park, W. *Council*, 1870-71

1862 GAYTON, WILLIAM, L.R.C.P. Ed., 85, Brick lane, Spitalfields, N.E.

1869 GEIKIE, WALTER B., M.D., F.R.C.S. Ed., Lecturer on Clinical Medicine in the Toronto School of Medicine, Toronto, Ontario, Canada.

1859 GERVIS, HENRY, M.D., Assistant Obstetric Physician to, and Lecturer upon Forensic Medicine at, St. Thomas's Hospital; Consulting Physician to the Deaf and Dumb Asylum, and to the Asylum for Fatherless Children; 12, St. Thomas's street, Southwark, S.E. *Council*, 1864-66. *Hon. Sec.* 1867-70. *Vice-Pres.* 1871.

1866 GERVIS, FREDERICK HEUDEBOURCK, 1, Fellowes road, Hampstead, N.W.

1866 GIDDINGS, WILLIAM KITTO, L.R.C.P. Ed., Calverley, near Leeds, Yorkshire.

1860 GILL, SAMUEL LAWRENCE, L.R.C.P. Ed., 4, Campbell terrace, Bow road, E.

1869 GILL, WILLIAM, 43, Woburn place, Russell square, W.C.

1867 GITTINS, JOHN, L.R.C.P. Ed., St. Olave's Union, Parish street. Southwark, S.E.

1869 GODDEN, JOSEPH, L.K.Q.C.P. Ireland; Sudley House, Claughton Firs, Birkenhead.

1868 GODWIN, ASHTON, M.D., 11, Pelham crescent, Brompton, S.W.

1861 GOSS, SAMUEL DAY, M.D., F.R.G.S., 111, Kennington Park road, S.E. *Council*, 1871.

1869 GOSS, TREGENNA BIDDULPH, 31, The Paragon, Bath.

Elected

1859 GOULSTONE, JOHN GRIFFITH, M.D., 30, Clarence street, Liverpool.

1861 GREAM, GEORGE THOMPSON, M.D., F.R.C.P., Physician-Accoucheur to H.R.H. the Princess of Wales; 2, Upper Brook street, Grosvenor square, W. *Council*, 1862-63. *Vice-Pres.* 1864-66.

1859 GREENHALGH, ROBERT, M.D., Physician-Accoucheur to, and Lecturer on Midwifery at, St. Bartholomew's Hospital; Consulting Physician to the Samaritan Free Hospital, and to the City of London Lying-in Hospital; 72, Grosvenor street, W. *Council*, 1863, 1867-69. *Vice-Pres.* 1864-66.

1863 GRIFFITH, G. DE GORREQUER, Physician to the Hospital for Women and Children, Pimlico; Physician-Accoucheur to St. Saviour's Maternity; 9, Lupus street, St. George's square, S.W.

1869 GRIFFITH, JOHN T., M.D., Talfourd House, Camberwell.

1859 GRIFFITH, THOMAS TAYLOR, F.R.C.S., Consulting Surgeon to the Wrexham Infirmary; Wrexham, Denbighshire. *Council*, 1870-71.

1870 GRIGG, WILLIAM CHAPMAN, M.D., 2, Old Burlington street.

1859 GRIMSDALE, THOS. F., L.R.C.P. Ed., Consulting Surgeon to the Lying-in Hospital, and late Lecturer on Diseases of Children, &c., at the Royal Infirmary School of Medicine; 29, Rodney street, Liverpool. *Council*, 1861-62.

1870 GROSS, REUBEN, M.D. [care of Messrs. J. and A. Macmillan], St. John's, New Brunswick, Canada.

1865 GWYN, GEORGE F., Westcroft House, Hammersmith, W.

1867 HADAWAY, JAMES, L.R.C.P. Ed., 47B, Welbeck street, Cavendish square, W.

1859 HADEN, FRANCIS SEYMOUR, F.R.C.S., 62, Sloane street, S.W. *Council*, 1861-63, 1868-70. *Vice-Pres.* 1865-67.

1859 HALL, ALFRED, M.D., Senior Physician to the Brighton Dispensary; 30, Old Steyne, Brighton. *Council*, 1864-65. *Vice-Pres.* 1866-68. *Hon. Loc. Sec.*

1859 HALL, FREDERICK, 1, Jermyn street, St. James's, S.W.

Elected

1867 HALL, JOHN HENRY WYNNE, L.R.C.P. Ed., 6, Portland place, Wandsworth road, S.W.

1862 HALL, WILLIAM, Lecturer on Physiology and Diseases of Women and Children, Leeds School of Medicine; Hillary place, Leeds. *Hon. Loc. Sec.*

1860 HARDEY, KEY, Surgeon to the West City Dispensary; 4, Wardrobe place, Doctors' Commons, E.C.

1869 HARDINGE, HENRY, M.D., Physician to the Great Northern Hospital, 18, Grafton street, Bond street, W.

1859 HARPER, PHILIP H., F.R.C.S., 30, Cambridge street, Hyde park, W.

1859 HARRINSON, ISAAC, F.R.C.S., Castle street, Reading, Berks. *Council*, 1862-65. *Hon. Loc. Sec.*

1862 HARRIS, CHARLES, M.D., Northiam, Staplehurst, Sussex.

1861 HARRIS, HERBERT ROBEY, 52, Bolton street, Bury, Lancashire.

1867 HARRIS, WILLIAM H., M.D., Ostacamund, Neilgherries, India [agent: Mr. H. K. Lewis, Gower street].

1861 HARRIS, WILLIAM JOHN, 13, Marine Parade, Worthing.

1865 HARVEY, ROBERT, M.D., Civil Surgeon of Bhurtpore, near Agra, India [*viâ* Bombay]. [Per Alex. Harvey, M.D., 228, Union street, Aberdeen.]

1859 HARVEY, WILLIAM, 48, Lonsdale square, Islington, N.

1861 HAVILAND, EDWARD SAVAGE, M.D., 466, Edgeware road, W.

1868 HAY, THOMAS BELL, L.R.C.P. Ed.; 43, Caledonian road, N.

1865 HAYES, HAWKESLEY ROCHE, Basingstoke, Hants.

1862 HAYMAN, CHARLES CHRISTOPHER, M.D., 22, Grand Parade, Eastbourne, Sussex.

1869 HAYWARD, SIDNEY, M.D., Physician to the Victoria Hospital for Children, and to the Samaritan Free Hospital for Women; 118, Warwick street, Pimlico, S.W.

1864 HEAD, EDWARD, M.B., Obstetric Physician to, and Lecturer on Midwifery at, the London Hospital; 91, Harley street, W. *Council*, 1870-71.

1865 HECKFORD, NATHANIEL, L.R.C.P. Ed., East London Children's Hospital, Ratcliff cross, E.

1867 HEMBROUGH, JOHN WILLIAM, Waltham, Grimsby.

Elected

1869 HEMSTED, HENRY, Whitchurch, Hants.

1870 HENDERSON, ALEXANDER, 2, Meadow Bank place, Partick, Glasgow.

1860 HESS, AUGUSTUS, M.D., Physician to the Jews' Hospital, Norwood; 14, Artillery place, Finsbury square. E.C.

1859 HEWITT, GRAILY, M.D., F.R.C.P., Professor of Midwifery in University College, London, and Obstetric Physician to University College Hospital; 36, Berkeley square, W. *Hon. Sec.* 1859-64. *Treas.* 1865-66. *Vice-Pres.* 1867-68. *Pres.* 1869-70. *Council*, 1871.

1862 HEWITT, TOM SMITH, M.D., Ivy Cottage, Winkfield, Windsor, Berks,

1867 HICKINBOTHAM, JAMES, L.R.C.P. Ed., 405, Nechell's Park road, Birmingham.

1860 HICKS, JOHN BRAXTON, M.D., F.R.C.P., F.R.S., Physician-Accoucheur to, and one of the Lecturers on Midwifery and the Diseases of Women and Children at, Guy's Hospital; Physician to the Royal Maternity Charity, and to the Royal Infirmary for Diseases of Children and Women, Waterloo road; 9, St. Thomas's street, Southwark, S.E. *Council*, 1861-62, 1869. *Hon. Sec.* 1863-65. *Vice-Pres.* 1866-68. *Treas.* 1870. *Pres.* 1871.

1860 HIGGS, THOMAS FREDERIC, L.R.C.P. Ed., 194, High street, Dudley, Worcestershire.

1868 HIME, THOMAS WHITESIDE, M.B., 5, Howard street, Sheffield.

1865 HODDER, Edward M., M.D., Lecturer on Obstetrics, Toronto, School of Medicine; Toronto, Canada West. *Hon. Loc. Sec.*

1859 HODGES, RICHARD, M.D., F.R.C.S., 1, Montagu street, Portman square, W.

1859 HODGSON, GEORGE FREDERICK, 52, Montpellier rd., Brighton.

1864 HOFFMEISTER, WILLIAM CARTER, M.D., Surgeon to the Queen in the Isle of Wight; Clifton House, Cowes, Isle of Wight.

1859 HOLMAN, CONSTANTINE, M.D., Reigate, Surrey. *Council*, 1867-69. *Vice-Pres.* 1870-71.

1860 HOLMAN, HENRY MARTIN, M.D., Hurstpierpoint, Sussex.

Elected

1864 Hood, Wharton Peter, M.D., 65, Upper Berkeley street, Portman square, W.

1866 Horniblow, Richard E. Brain, M.D., 24, Lansdowne place, Leamington.

1861 Horton, George Edward, 31, Wolverhampton street, Dudley, Worcestershire.

1864 Houghton, Henry George, L.K.Q.C.P. Ireland; 6, Mount street, Grosvenor square, W.

1859 Hussey, Edward Law, F.R.C.S., Senior Surgeon to the Radcliffe Infirmary, and Consulting Surgeon to the County Lunatic Asylum and the Warneford Asylum; 8, St. Aldate's, Oxford.

1859 Hutchinson, Jonathan, F.R.C.S., Surgeon to the London Hospital; 4, Finsbury circus, E.C. *Council*, 1869-71.

1870 Huthwaite, Charles, L.R.C.P. Ed., Stratford square, Nottingham.

1861 Hutton, Charles, M.D., Physician to the General Lying-in Hospital; 26, Lowndes street, Belgrave square, S.W.

1859 Ilott, James William, Bromley, Kent.

1859 Image, William Edmund, F.R.C.S., Senior Surgeon to the Suffolk General Hospital; Bury St. Edmund's, Suffolk. *Council*, 1870-71.

1870 Izod, Freeman, Tottenham, Middlesex.

1864 Jackson, Edward, M.B., Surgeon to the Sheffield Hospital for Women; Fern Bank, Glossop road, Sheffield.

1864 Jackson, Robert, M.D., 53, Notting Hill square, W.

1868 James, Alfred, M.D., Perry Vale, Forest Hill, S.E.

1859 James, Henry, F.R.C.S., Elmhurst, Weybridge, Surrey. *Council*, 1862-63.

1862 Jay, Frederick Fitzherbert, Valley Bridge House, South Cliff, Scarboro', Yorkshire.

1863 Jenkins, Robert W., 13, Charlotte street, Bedford square, W.C.

1859 Jennings, Joseph C. S., Abbey House, Malmesbury, Wilts.

1860 Jepson, Henry, F.R.C.S., Surgeon to the Kingston Dispensary; Hampton, Middlesex, S.W.

Elected

1862 JOHNSON, EDWARD, M.D., 19, Cavendish place, Cavendish square, W.

1861 JONES, EDWARD, M.D., The Park, Sydenham, Kent.

1868 JONES, EVAN, Ty-Mawr, Aberdare, Glamorganshire.

1859 JONES, GEORGE, 12, New Hall street, Birmingham.

1868 JONES, JOHN, 60, King street, Regent street, W.

1866 JONES, ROBERT, 19, Stretford road, Hulme, Manchester.

1868 JONES, WILLIAM, L.R.C.P., Ty-Newdd, Ruabon, Denbighshire.

1870 JONES, WILLIAM, Glynneath, Neath, Glamorganshire.

1868 JORDAN, WILLIAM ROSS, Manor House, Moseley, near Birmingham.

1867 JUNKER, F. ETHELBERT, M.D., 36, Mount street, Grosvenor square, W.

1859 KEALY, JOHN ROBERT, M.D., Admiralty Surgeon, Portsmouth Harbour; Ashley House, Gosport, Hants. *Hon. Loc. Sec.*

1859 KEELE, GEORGE THOMAS, 81, St. Paul's road, Highbury, N.

1859 KENDALL, THOMAS MARSTERS, F.R.C.S., Surgeon to their R.H. the Prince and Princess of Wales at Sandringham, Surgeon to the West Norfolk and Lynn Hospital; King's Lynn, Norfolk.

1868 KENYON, GEORGE A., M.B., Fairfield House, Hamilton road, Lower Norwood, Surrey.

1861 KERBEY, WILLIAM HOLMAN, Weobley, Herefordshire.

1865* KERNOT, GEORGE CHARLES, M.D., 3, Chrisp street, Poplar, E.

1859 KIALLMARK, HENRY WALTER, 66, Prince's square, Westbourne grove, W.

1869 KINGSFORD, C. DUDLEY, M.D., Upper Clapton, N.E.

1860 KINGSFORD, EDWARD, F.R.C.S., Surgeon to the Sunbury Dispensary; Sunbury, Middlesex.

1862 KIRKPATRICK, JOHN RUTHERFORD, M.B. Dubl., Examiner in Midwifery, Royal College of Surgeons, Ireland, 32, Rutland square, Dublin.

1860 KISCH, JOSEPH, 2, Circus place, Finsbury circus, E.C.

1867 KNAGGS, HENRY G., M.D., 49, Kentish Town road, N.W.

1867 LANGFORD, CHARLES P., 187, Goswell road, E.C.

Elected

1859 LANGMORE, JOHN CHARLES, M.B., F.R.C.S., 12, Sussex gardens, Hyde Park, W. *Council*, 1861-64. *Vice-Pres.* 1869-71.

1866 LANGSTON, THOMAS, L.R.C.P. Ed., 29, Broadway, Westminster, S.W.

1862 LANPHIER, RICHARD, M.B. Dubl., Alford, Lincolnshire.

1867 LEAF, WALTER, Surgeon to the St. Marylebone General Dispensary; 14, Furnival's Inn, Holborn, E.C.

1859 LEE, NEWTON B. C., 26, Hanley road, Hornsey rise, N.

1859 LEECH, EDWARD, Pallant, Chichester, Sussex.

1860 LEISHMAN, WILLIAM, M.D., Physician to the University Lying-in Hospital, Regius Professor of Midwifery in the University of Glasgow; 156, Bath street, Glasgow. *Council*, 1866-68. *Vice-Pres.* 1869-70.

1868 LESLIE, WILLIAM BURNUP, M.D., Stonehaven, Kincardineshire.

1870 LIGERTWOOD, JOHN, M.D., late Assistant-Surgeon, R.N., China Expedition; 73, Northbrook street, Newbury, Berks.

1867 LILLEY, FREDERICK JOHN, L.R.C.P. Ed., 222, South Lambeth road, S.W.

1868 LLEWELLYN, EVAN, L.R.C.P. Ed., 9, Mount place, London Hospital, E.

1859 LOCOCK, SIR CHAS., Bart., M.D., F.R.C.P., 26, Hertford street, Mayfair, W. *Honorary President.*

1859 LOMBE, THOMAS ROBERT, M.D., Bemerton, Torquay.

1870 LONG, MARK, M.D., Surgeon to the Poplar Hospital, 1, Adelaide place, Barking road, Canning Town, Essex.

1861 LOVE, GILBERT, Wimbledon, Surrey, S.W.

1866 LOVEGROVE, CHARLES, M.D., 18, Westbourne place, Eaton square, S.W.

1866 LOW, ALEX. JAMES, Le Coin, St. Brelade's, Jersey.

1862 LOWE, GEORGE, F.R.C.S., Burton-on-Trent, Staffordshire.

1869 LOWNDES, FREDERICK WALTER, 62, Mount Pleasant, Liverpool.

1866 LUCEY, WILLIAM CUBITT, M.D., Norfolk villas, Junction road, Upper Holloway, N.

1869 LYDALL, WYKEHAM H., 19, Mecklenburgh square, W.C.

Elected

1868 LYNCH, J. ROCHE, 30, Kensington Park road, W.

1871 MCCALLUM, DUNCAN CHARLES, M.D., Montreal, Canada.

1859 MACKINDER, DRAPER, M.D., Consulting-Surgeon to the Gainsborough Dispensary; Gainsborough, Lincolnshire. *Council*, 1871.

1859 MACRAE, JOHN, 4, High street, Lewes, Sussex.

1861 MCVEAGH, DENNIS, L.K.Q.C.P. Ireland, 33, Bishop street, Coventry, Warwickshire.

1866 MADDEVER, JOHN COOMBE, M.D., 19, Battery place, Rothesay.

1859 MADGE, HENRY M., M.D., 32, Fitzroy square, W. *Council*, 1863-65.

1871 MALINS, EDWARD, M.D., Cradley Heath, Brierley Hill, Staffordshire.

1868 MARCH, HENRY COLLEY, M.D., 2, West street, Rochdale.

1860 MARLEY, HENRY FREDERICK, Padstow, Cornwall.

1859 MARLEY, RICHARD, Bromyard, near Worcester, Herefordshire.

1868 MARRIOTT, CHARLES WILLIAM, Dynevor House, Leamington, Warwickshire.

1869 MARRIOTT, OSBORNE DELANE, M.B., C.M., Sevenoaks, Kent.

1862 MARRIOTT, ROBERT BUCHANAN, Swaffham, Norfolk.

1859 MARSHALL, JOHN BRAKE, Nightingale road downs, Clapton, N.E.

1864 MARTIN, LAWRENCE J., M.D., Physician to the Melbourne Lying-in Hospital; 126, Collins street east, Melbourne, Victoria.

1859 MARTYN, WILLIAM, M.D., F.R.C.S., 6, Trevor terrace, Rutland gate, Brompton, S.W.

1871 MATHIAS, DAVID, Cardigan, South Wales.

1866 MATTEI, ANTOINE, M.D., Professor of Midwifery, Rue Thérèse 4, Paris.

1861 MATTHEWS, JOHN, M.D., 4, Mylne street, Myddelton square, E.C.

1867 MAY, HENRY, L.R.C.P. Lond., Fairfield House, Lichfield road, Aston, Birmingham.

Elected

1859 MEADOWS, ALFRED, M.D., Physician-Accoucheur to the General Lying-in Hospital, York road; Physician to the Hospital for Women, Soho square; 27, George street, Hanover square, W. *Council*, 1862-64. *Hon. Sec.* 1865-66. *Hon. Lib.* 1865. *Treas.* 1867-69.

1867 MICKLEY, ARTHUR GEORGE, M.B. Lond., House Surgeon, General Hospital, Nottingham.

1867 MILLER, BENJAMIN, 17, St. James's place, S.W.

1869 MILWARD, JAMES, 62, Crockherbtown, Cardiff.

1869 MINNS, PEMBROKE R. J. B., M.D., Thetford, Norfolk.

1859 MITCHELL, JOSEPH THOMAS, F.R.C.S. [8, Percy place,] 176, Clapham road, S.W. *Council*, 1863-67.

1867 MITCHELL, ROBERT NATHAL, M.D., 1, Amersham park villas, New Cross, Kent.

1869 MOORE, JOSEPH, M.D., 9, Linden villas, Blue Anchor road, Bermondsey, S.E.

1859 MOORHEAD, JOHN, M.D., Surgeon to the Weymouth Infirmary and Dispensary; Weymouth, Dorset.

1868 MOOTOOSAWMY MOODELLY, P. S., M.D., Native Surgeon, Uncovenanted Service, Madras, Manargoody, Tanjore.

1863 MORGAN, EDWARD, Park street, Llanelly, Caermarthenshire.

1869 MORGAN, W. H., Surgeon 23rd Regiment, Tinilon, Travancore.

1865 MOSELEY, GEORGE, F.R.C.S., 51, Priory road, Kilburn, N.W.

1859 MURRAY, GUSTAVUS CHARLES P., M.D., Obstetric-Physician to the Great Northern Hospital; 17, Green street, Grosvenor square, W. *Council*, 1864-65. *Hon. Sec.* 1866-69. *Vice-Pres.* 1870-71.

1859 MUSGRAVE, JOHNSON THOMAS, L.R.C.P. Ed., 39, Finchley road, N.W. *Council*, 1859-60.

1859 NAPPER, ALBERT, Broad Oak, Cranleigh, Guildford, Surrey. *Council*, 1866-68.

1863 NASON, JOHN JAMES, M.B. Lond., 11, Bridge street, Stratford-upon-Avon.

1859 NASON, RICHARD BIRD, Nuneaton, Warwickshire.

1859 NEAL, JAMES, M.D., Hon. Surgeon to the Lying-in Hospital, Birmingham; 85, New Hall street, Birmingham.

Elected

1867 NEATE, CHARLES, Uttoxeter, Staffordshire.

1866 NEILD, JAMES EDWARD, M.D., Lecturer on Forensic Medicine, Melbourne University; 166, Collins street east, Melbourne.

1859 NEWMAN, WILLIAM, M.D., Surgeon to the Stamford and Rutland Infirmary; Barn Hill House, Stamford, Northamptonshire.

1859 NEWTON, EDWARD, F.R.C.S., 4, Upper Wimpole street, W. *Council*, 1865-67.

1868 NICHOLLS, JAMES, M.D., Duke street, Chelmsford, Essex.

1861 NICHOLS, GEORGE W., Augusta House, Rotherhithe, S.E.

1869 NORTON, SELBY, M.D., Rye House, Putney Hill, Surrey.

1859 NUNN, THOMAS WILLIAM, F.R.C.S., Surgeon to the Middlesex Hospital; 8, Stratford place, Oxford street, W. *Council*, 1868-69.

1868 OATES, PARKINSON, M.D., 164, Cambridge street, Pimlico, S.W.

1859 OLDHAM, HENRY, M.D., F.R.C.P., Consulting Physician-Accoucheur to, and Lecturer on Midwifery and Diseases of Women and Children at, Guy's Hospital; 4, Cavendish place, Cavendish square, W. *Vice-Pres.* 1859. *Council*, 1860, 1865-66, 1868-71. *Treas.* 1861-62. *Pres.* 1863-64.

1859 OLDHAM, JAMES, F.R.C.S., Consulting Surgeon to the Brighton Lying-in Institution; 53, Norfolk square, Brighton. *Council*, 1866-68.

1869 ORD, GEORGE RICE, Streatham Hill, Surrey.

1863 OSWALD, JAMES WADDELL JEFFRIES, L.R.C.P. Ed., 38, Lambeth walk, S.E.

1863 OWEN, ALBERT PHILIP, 10, Stock Orchard villas, Holloway.

1869 OXLEY, MARTIN G. B., L.K.Q.C.P. Ireland, 49, Rodney street, Liverpool.

1859 PALFREY, JAMES, M.D., Assistant Obstetric Physician to the London Hospital, 18, Finsbury square, E.C.

1867 PARKS, JOHN, The Wylde, Bury, Lancashire.

1865* PATERSON, JAMES, M.D., Rosewall, Partick, Glasgow.

1860 PAYNE, CHARLES HENRY, M.D., Wimbledon, Surrey.

Elected

1866 PEACOCK, ALBERT LOUIS, Ford Cottage, Churchinford, near Honiton, Devonshire.

1864 PEARSON, DAVID RITCHIE, M.D., 23, Upper Phillimore place, Kensington, W.

1871 PEDLER, GEORGE HENRY, 6, Trevor terrace, Rutland gate, S.W.

1859 PEIRCE, RICHARD KING, Surgeon to the Notting hill and Shepherd's Bush Dispensary, 16, Norland place, Notting hill, W.

1871 PERRIGO, JAMES, M.A., M.D., Montreal, Canada.

1866 PHILLIPS, JOHN JONES, M.D., Assistant-Obstetric Physician to Guy's Hospital; Assistant-Physician to the Hospital for Sick Children; and Physician to the Royal Maternity Charity; 26, Finsbury square, E.C. *Hon. Lib.* 1870. *Hon. Sec.* 1871.

1866 PILCHER, WILLIAM JOHN, 43, West street, Boston, Lincolnshire.

1859 PINCHARD, BENJAMIN, M.D., Cottenham, Cambridgeshire.

1868 PLAYFAIR, GEORGE RANKEN, M.D., Surgeon-Major, H.M.'s Indian Army, Principal of the Medical College, Agra.

1864 PLAYFAIR, W. S., M.D., Assistant-Physician for the Diseases of Women and Children to King's College Hospital; 5, Curzon street, Mayfair, W. *Council,* 1867. *Hon. Librarian,* 1868-69. *Hon. Sec.* 1870-71.

1859* POLLARD, WILLIAM, Surgeon to the Torbay Hospital; Southlands, Torquay, Devon.

1860 POLLOCK, TIMOTHY, M.D., 26, Hatton Garden, E.C. *Council,* 1866-68.

1860 PORTER, CHARLES, 54, Digbeth, Birmingham.

1859 POTTER, JEPHSON, M.D., Physician to the Liverpool General Hospital for Consumption; 6, Soho street, Liverpool.

1864 POTTER, JOHN BAPTISTE, M.D., Assistant-Obstetric Physician to the Westminster Hospital; 56, Maddox street, Bond Street, W.

1859 POUND, GEORGE, Odiham, Hants.

1863 POWELL, JOSIAH T., M.D., 347, City road, E.C.

Elected

1864 PRICE, WILLIAM NICHOLSON, Lecturer on Midwifery at the Leeds School of Medicine; 7, East parade, Leeds.

1863 PRICE, WILLIAM PRESTON, M.D., Surgeon to the Metropolitan Infirmary for Scrofulous Children, Margate; 1, Ethelbert Crescent, Margate.

1859 PRIESTLEY, WILLIAM O., M.D., F.R.C.P., Professor of Midwifery in King's College, London; Physician-Accoucheur to King's College Hospital; and Consulting Physician-Accoucheur to the St. Marylebone Infirmary; 17, Hertford street, Mayfair, W. *Council*, 1859-61, 1865-66. *Vice-Pres.* 1867-69.

1859 RADFORD, THOMAS, M.D., Consulting Physician to St. Mary's Hospital, Manchester; Moor field, Higher Broughton, Manchester. *Vice-Pres.* 1859.

1859 RAMSAY, JOHN ALLEN, L.R.C.P. Ed., Great Shelford, Cambridge.

1859 RANDALL, JOHN, M.D., Lecturer on Medical Jurisprudence, St. Mary's Hospital Medical School; Medical Officer, St. Marylebone Infirmary; 14, Portman street, Portman square, W.

1860 RANSOM, ROBERT, M.D., F.R.C.S., 5, Jesus Lane, Cambridge.

1861 RASCH, ADOLPHUS A. F., M.D,, Physician to the Eastern Dispensary of the German Hospital; 7, South street, Finsbury square, E.C. *Council*, 1871.

1870 RAY, EDWARD REYNOLDS, Dulwich.

1860* RAYNER, JOHN, M.D., Swaledale House, Quadrant road north, Highbury New Park, N.

1859 RAYNES, HENRY, Gringley-on-the-Hill, Bawtry, Yorkshire.

1859 REE, HENRY PAWLE, L.R.C.P. Ed., F.R.C.S., St. John's, Fulham, S.W.

1859 REMINGTON, THOMAS, M.D., Visiting Medical Officer to the S. Lambeth and Brixton Dispensary; 1, Grove House, North Brixton, S.W.

1862 RICHARDS, DAVID, 8, St. George's place, Brighton, Sussex.

1859 RICHARDS, SAMUEL, M.D., 36, Bedford square, W.C. *Council*, 1864-66.

1862 RICHARDS, S. SMITH C., 36, Bedford square, W.C.

Elected

1859 RICHARDSON, RICHARD, L.R.C.P. Ed., Rhayader, Radnorshire.

1859 RICHARDSON, WILLIAM THOMAS, Ivy House, Highgate, N.

1871 ROBERTS, ARTHUR, 12, Young street, Kensington.

1859* ROBERTS, DAVID LLOYD, M.D., Surgeon to St. Mary's Hospital, Manchester; 23, St. John's street, Deansgate, Manchester. *Council*, 1868-70. *Vice-Pres.* 1871. *Hon. Loc. Sec.*

1867 ROBERTS, DAVID W., M.D., 56, Manchester street, Manchester square, W.

1860 ROBERTS, ROBERT PRICE, Shamrock House, Rhyl, Flintshire.

1859 ROBINSON, THOMAS, M.D., 35, Lamb's Conduit street, W.C.

1868 ROBSON, HOPE F. A., M.D., Iver, near Uxbridge.

1868 ROGERS, ADAM MACDOUGALL, Surgeon, Bombay Army, Malabar Hill, Bombay.

1859 ROGERS, WILLIAM RICHARD, M.D., Physician to the Samaritan Free Hospital; 56, Berners street, Oxford street, W. *Council*, 1870-71.

1859 ROOTS, WILLIAM SUDLOW, F.R.C.S., F.L.S., Surgeon to the Royal Establishment at Hampton Court, Kingston-on-Thames.

1860 ROPER, ALFRED GEORGE, 57, North End, Croydon, Surrey.

1865 ROPER, GEORGE, Bank House, Aylsham, Norfolk.

1859 ROSE, HENRY COOPER, M.D., High street, Hampstead, N.W.

1859 ROSS, DANIEL, Surgeon to the Metropolitan Police; 10, Commercial place, Commercial road east, E.

1859 ROUTH, CHARLES HENRY FELIX, M.D., Physician to the Samaritan Free Hospital for Women and Children; 52, Montagu square, W. *Council*, 1859-61.

1866 RUGG, GEORGE PHILIP, M.D., 1, Stockwell villas, Clapham road, Stockwell, S.W.

1869 RUSSELL, CHARLES JAMES, Rose Cottage, Messingham, Lincolnshire.

1870 RUSSELL, LOGAN D. H., M.D. New York; Camden, Wyoming, U.S.

Elected

1866 SABOIA, V., M.D., Rio de Janeiro [*per* Captain Argollo, 1 Princes terrace, Bayswater].

1864 SALTER, JOHN H., D'Arcy House, Tolleshunt D'Arcy, Kelvedon, Essex.

1868* SAMS, JOHN SUTTON, St. Peter's Lodge, Eltham road, Lee, Kent.

1865 SANSOM, ARTHUR ERNEST, M.D., Physician to the Royal Hospital for Diseases of the Chest, City road; 29, Duncan Terrace, Islington, N.

1870 SAUL, WILLIAM, M.D., 4, Charlotte street, Fitzroy square, W.

1863 SAVAGE, HENRY, M.D., Consulting Physician to the Samaritan Hospital for Women; 45, Baker street, and Ridge mount, Laurie park south, Norwood, S.E. *Council*, 1871.

1870 SCOTT, HENRY THOMAS, Havelock House, Lansdowne road Croydon, Surrey.

1859 SCOTT, JOHN, F.R.C.S., Surgeon to the Hospital for Women, Soho square; 49, Harley street, Cavendish square, W. *Council*, 1868–70. *Vice-Pres.* 1871.

1870 SCOTT, JOHN, M.D., New street, Sandwich.

1870 SCOTT, JOHN, M.D., 67, Folsam street, San Francisco.

1868 SEALY, GEORGE J., M.D., Oatlands park, Weybridge, Surrey.

1860 SEDGWICK, LEONARD WILLIAM, M.D., 2, Gloucester terrace, Hyde park, W. *Council*, 1871.

1863 SEQUEIRA, HENRY LITTLE, 1, Jewry street, Aldgate, E.C.

1866 SEQUEIRA, JAMES SCOTT, 34, Leman street, Goodman's fields, E.

1860 SEWELL, CHARLES BRODIE, M.D., 76, Guilford street, Russell square, W.C., and 13, Fenchurch street, E.C.

1870 SEYDEWITZ, BARON PAUL VON, M.D., 21, Shadwell road, Upper Holloway road, N.

1862 SHARMAN, MALIM, Surgeon to the Birmingham Free Hospital for Sick Children; 18, New Hall street, Birmingham.

1859 SHARPIN, HENRY WILSON, F.R.C.S., Surgeon to the Bedford General Infirmary, Bedford. *Council*, 1871.

Elected

1860 SHAW, GEORGE, Portland House, Battersea, S.W.

1869 SHAW, HENRY SISSMORE, 112, Upgate, Louth, Lincolnshire.

1859 SHEARMAN, EDWARD JAMES, M.D., F.R.C.S., F.R.S. Ed., Consulting Physician to the Rotherham Dispensary; Moorgate, Rotherham, Yorkshire.

1859 SHEEHY, WILLIAM HENRY, L.R.C.P. Ed., 4, Claremont square, Pentonville, N.

1867 SHEPHERD, FREDERICK, L.R.C.P. Ed., 33, King Henry's road, South Hampstead, N.W.

1866 SHERATON, GEORGE ROBERT, L.R.C.P. Ed., Sedgefield, Ferryhill, Durham.

1862 SHILLINGFORD, ISAAC SHORTLAND, 124, Hill street, Peckham, S.E.

1859 SHIPTON, WILLIAM PARKER, Consulting Surgeon to the Devonshire Hospital; Buxton, Derbyshire.

1860 SHIRLEY, HENRY JAMES, F.R.C.S., Ash-next-Sandwich, Kent.

1861 SHORTT, JOHN, M.D., Surgeon H.M. Madras Army, and Superintendent-General of Vaccination, Madras Presidency. *Hon. Loc. Sec.* [Agents: Messrs. Baring, Brothers, 8, Bishopsgate within, E.C.]

1860 SKINNER, THOMAS, M.D., Obstetric Physician to the Lying-in Hospital; Dunedin House, 64, Upper Parliament street, Liverpool. *Council*, 1865-66. *Hon. Loc. Sec.*

1859 SLEEMAN, PHILIP ROWLING, F.R.C.S., Montrose House, Queen's road, Clifton.

1861 SLOMAN, SAMUEL GEORGE, Farnham, Surrey.

1861 SLYMAN, WILLIAM DANIEL, 26, Caversham road, Kentish Town, N.W.

1860 SMART, THOMAS TOVEY, L.R.C.P. Ed., South Villa, Bedminster, Bristol.

1859 SMILES, WILLIAM, M.D., Surgeon to the House of Correction, Cold Bath Fields; 44, Bedford square, W.C.

1868 SMITH, CHARLES CASE, F.R.C.S.

1870 SMITH, FRANCIS WILLIAM, M.D., Dorchester.

1867 SMITH, HEYWOOD, M.B. Oxon., Assistant-Physician to the Hospital for Women, Soho square; 2, Portugal street, Grosvenor square, W.

Elected

1859 SMITH, PROTHEROE, M.D., Physician to the Hospital for Women, Soho square; 42, Park street, Grosvenor square, W.

1859 SMITH, WILLIAM JOHNSON, M.D., Consulting Physician to the Weymouth Infirmary and Dispensary; Greenhill, Weymouth, Dorset. *Council*, 1869-71.

1859 SMITH, W. TYLER, M.D., F.R.C.P., Physician-Accoucheur to, and Lecturer on Midwifery and Diseases of Women and Children at, St. Mary's Hospital; 21, Upper Grosvenor street, W. *Treasurer & Vice-Pres.* 1859-60. *Pres.* 1861-62. *Council*, 1863-71.

1860 SNELL, EDMUND, L.R.C.P. Ed., 59, Stepney green, E.

1866 SOPER, WILLIAM, Medical Officer, Jews' Hospital, Norwood; 4, Clapham rise [283, Clapham road], S.W.

1869 SPAULL, BARNARD, F.R.C.S., 5, Vale place, Hammersmith, W.

1868 SPAULL, BARNARD E., 2, Vale place, Hammersmith, W.

1859 SPENCER, GEORGE, 8, Kensington park road, W.

1860 SPENCER, LAWRENCE, M.D., 9, Winckley square, Preston, Lancashire.

1862 SPRY, GEORGE FREDERICK, M.D., Assistant-Surgeon, 2nd Life Guards, Hyde park barracks, Knightsbridge, W.

1867 SQUAREY, CHARLES E., M.B., Assistant-Physician to the Hospital for Women, 13, Upper Wimpole street, W.

1859 SQUIRE, WILLIAM, 6, Orchard street, Portman square, W. *Council*, 1866-68.

1860 STEDMAN, ROBERT SAVIGNAC, Sharnbrook Grange, Bedford.

1866 STEELE, ARTHUR BROWNE, L.K.Q.C.P. Ireland, Lecturer on Midwifery, Royal Infirmary School of Medicine; 54, Rodney street, Liverpool.

1869 STEELE, HENRY MURRAY, Victoria Hospital for Children, Gough House, Queen's road, Chelsea, S.W.

1859 STONE, JOSEPH, M.D., 84, Bloomsbury, Oxford street, Manchester.

1860 STONE, THOMAS, F.R.C.S.

1859 STOWERS, NOWELL, 125, Kennington park road, Kennington, S.E.

Elected

1866 STRANGE, WILLIAM HEATH, M.D., 4, The Avenue, Belsize park, Hampstead, N.W.

1859 STUTTER, FREDERICK AUGUSTUS, M.D., Farnboro' House, Upper Sydenham, Kent, S.E.

1870 SUMMERHAYES, WILLIAM, 18, Sandringham gardens, Ealing.

1862 SUTHERLAND, WILLIAM, M.D., 22, George street, Croydon, Surrey.

1862 SUTTON, FIELD FLOWERS, M.D., Balham hill, Clapham, S.W.

1859 SWAYNE, JOSEPH GRIFFITHS, M.D., Physician-Accoucheur to the Bristol General Hospital; Harewood House, 74, Pembroke road, Clifton, Bristol. *Council*, 1860-61. *Vice-Pres.* 1862-64. *Hon. Loc. Sec.*

1860 SWEETING, GEORGE BACON, M.R.C.P., King's Lynn, Norfolk.

1859 SYMONDS, FREDERICK, F.R.C.S., Surgeon to the Radcliffe Infirmary; 35, Beaumont street, Oxford. *Council*, 1862-65. *Hon. Loc. Sec.*

1866 TANNAHILL, ROBERT DUNLOP, M.D., Physician to the Lying-in Hospital; 106, Bath street, Glasgow.

1871 TANNER, JOHN, M.D., L.R.C.P. Ed., 118, Newington Causeway.

1859 TANNER, THOS. HAWKES, M.D., F.L.S., 9, Henrietta street, Cavendish square, W. *Hon. Sec.* 1859-62. *Vice-Pres.* 1863-65.

1859 TAPSON, ALFRED JOSEPH, M.B. Lond., 35, Gloucester gardens, Westbourne terrace, W. *Council*, 1862-64.

1863 TAPSON, JOSEPH ALFRED, Surgeon to the Clapham General Dispensary; 83, High street, Clapham, S.W.

1862 TASKER, RICHARD THOMAS, Melbourne, near Derby.

1859 TAYLOE, EDWARD, South lodge, Clapham common, S.W.

1870 TAYLOR, ARTHUR, M.B., 180, Kennington Park road, S.E.

1859 TAYLOR, CHARLES, M.D., Pine house, Camberwell green, S.E. *Council*, 1869-71.

1859 TAYLOR, DAVID, 180, Kennington park road, S.E.

1869 TAYLOR, JOHN, Earl's Colne, Halstead, Essex.

1862 TAYLOR, THOMAS, F.R.C.S., 19, Bennett's Hill, Birmingham.

1862 THANE, GEORGE DANCER, M.D., 15, Montague street, Russell square, W.C.

Elected

1870 THOMAS, J. DAVIES, M.B., University College Hospital, and 44, Mildmay park, N.

1866 THOMPSON, JOHN, M.D., Bideford, Devon.

1870 THOMPSON, JOHN ASHBURTON, 207, Caledonian road, N.

1867 THOMPSON, JOSEPH, Junr., 1, Oxford street, Nottingham.

1869 THOMPSON, D. R., M.D., M.R.C.S., Officiating Civil Surgeon, Chingleput. [Messrs. De Beaux & Co., Esplanade Dispensary, Black Town, Madras.]

1867 THORBURN, JOHN, M.D., Lecturer on Midwifery, Manchester Royal School of Medicine; 333, Brighton place, Oxford street, Manchester.

1867 THORMAN, THOMAS, 17, Oxford street, Hyde park, W.

1860 THORNE, GEORGE LEWORTHY, M.D., Swanage, Dorset.

1862 THORNTON, WILLIAM HENRY, M.D., Springfield terrace, Dewsbury, Yorkshire.

1867 THORNTON, WILLIAM HENRY, Surgeon to the Royal National Sea Bathing Infirmary; Berkeley Lodge, Margate.

1860 TIFFEN, ROBERT, M.D., Wigton, Cumberland.

1866 TILLEY, SAMUEL, 70, Union road, Rotherhithe, S.E.

1859 TILT, EDWARD JOHN, M.D., Consulting Physician-Accoucheur to the Farringdon General Dispensary; 60, Grosvenor street, W. *Council*, 1867-68. *Vice-Pres.* 1869-70. *Treas.* 1871.

1859 TIMES, HENRY G., 23, Manchester street, Manchester square, W.

1869 TOMKINS, CHARLES P., L.K.Q.C.P. Ireland, Beddington park, Croydon.

1870 TOWNE, ALEXANDER, Junr., 354, Kingsland road, N.E.

1862 TRACY, RICHARD T., M.D., Physician to the Lying-in Hospital, Melbourne, Victoria.

1865 TREND, HENRY GRISTOCK, L.R.C.P. Ed., 191, Southgate road, Islington, N.

1859 TULLOCH, JAMES STEWART, M.D., Surgeon to the Westbourne Dispensary; 1, Pembridge place, Bayswater, W.

1865 TURNER, JOHN SIDNEY, Surgeon to the Anerley Dispensary Woodside, Anerley road, Upper Norwood, Surrey.

1861 TURNER, RICHARD, Surgeon to the Lewes Dispensary; High street, Lewes, Sussex.

Elected

1861 TWEED, JOHN JAMES, Junr., F.R.C.S., 14, Upper Brook street, W.

1860 VARENNE, EZEKIEL G., Kelvedon, Essex.

1860 VINCENT, PATRICK.

1864 WAHLTUCH, ADOLPHE, M.D., 280, Oxford street, Manchester.

1860 WALES, THOMAS GARNEYS, Jun., Downham Market, Norfolk.

1869 WALKER, ALFRED, M.B., Physician to the East London Hospital for Sick Children; 16, Keppel street, Russell square, W.C.

1866 WALKER, THOMAS JAMES, M.D., Surgeon to the General Infirmary, Peterborough; 18, Westgate, Peterborough.

1860 WALKER, WILLIAM HENRY, L.R.C.P. Ed., Aldborough, near Darlington, Yorkshire.

1870 WALLACE, FREDERICK, 243, Hackney road, N.E.

1860 WALLER, JOHN TURPIN, Flegg Burgh, Norfolk.

1867 WALTERS, JAMES HOPKINS, Faringdon, Berks.

1859 WANE, DANIEL, M.D., 20, Grafton street, Bond street, W.

1860 WARD, JOHN, Penistone, Sheffield, Yorkshire.

1859 WARDEN, CHARLES, M.D., Hon. Surgeon to the Birmingham Lying-in Hospital; 39, Temple street, Birmingham.

1862 WATKINS, CHARLES STEWART, 16, King William street, Strand, W.C.

1867 WATSON, WASDALE, Loughton House, Park square, Newport, Monmouthshire.

1861 WATTS, GEORGE HENRY, Thatcham, near Newbury, Berks.

1867 WEBB, FRED. E., 113, Maida vale, W.

1859 WEBB, HENRY SPEAKMAN, Welwyn, Herts.

1860 WELCHMAN, CHARLES EDWARD ELLIOT, Bore street, Lichfield, Staffordshire.

1867 WELLER, GEORGE, Forest lodge, Wanstead, Essex.

1859 WELLS, T. SPENCER, F.R.C.S., Surgeon in Ordinary to H.M.'s Household; Surgeon to the Samaritan Free Hospital for Women and Children; 3, Upper Grosvenor street, W. *Council*, 1859. *Vice-Pres.* 1868-70.

1859 WESTMACOTT, JOHN GUISE, M.D., Medical Officer to the Paddington Provident Dispensary; 19, St. Mary's terrace, Paddington, W.

Elected

1870 WHEATCROFT, SAMUEL HANSOM, L.R.C.P. Ed., 16, Broomhall street, Sheffield.

1860 WHEELER, DANIEL, Chelmsford, Essex.

1860 WHITE, FREDERICK GEORGE, L.R.C.P. Ed., Castle House, Chepstow, Monmouthshire.

1859 WHITEHEAD, JAMES, M.D., Physician to the Manchester Clinical Hospital; 87, Mosley street, Manchester. *Council*, 1859-61. *Vice-Pres.* 1868-69.

1870 WHITEHEAD, JOHN, M.D., 7, Poole's terrace, Seven Sisters road, Holloway, N.

1865 WHITEHEAD, WALTER, F.R.C.S. Ed., Surgeon to St. Mary's Hospital for the Diseases of Women and Children; 248, Oxford road, Manchester.

1864 WHITMARSH, WILLIAM MICHAEL, M.D., Surgeon to the Hounslow Lying-in Charity; Albemarle House, Hounslow, Middlesex.

1867 WILBE, RICHARD HAYDOCK, M.D., York lodge, 21, Finchley road, St. John's Wood, N.W.

1870 WILKIN, JOHN F., Roxby House, Folkestone.

1861 WILLIAMS, ARTHUR WYNN, M.D., Physician to the Samaritan Free Hospital; Physician-Accoucheur to the Western General Dispensary; 1, Montagu square, W. *Council*, 1871.

1861 WILLIAMS, DAVID JOHN, M.D., Queenscliff, Geelong, Victoria, Australia. *Hon. Loc. Sec.* [*Per* J. W. Voss, Esq., Yspitty works, Loughor, Llanelly.]

1864 WILLIAMS, EDWARD, M.D., Holt-street House, Wrexham.

1867 WILLIAMS, EVAN, Bryngwrau, near Holyhead, North Wales.

1867 WILLIAMS, HENRY LLEWELLYN, M.D., 9, Leonard place, Kensington, W.

1860 WILLIAMS, ROBERT HANKINSON, L.R.C.P. Ed., Great Eccleston, near Garstang, Lancashire.

1860 WILLS, JOHN, M.D., St. Helier's, Jersey.

1859 WILSON, JAMES GEORGE, M.D., Professor of Midwifery in the Andersonian University, Glasgow; Physician-Accoucheur to the Glasgow Lying-in Hospital and Dispensary; 9, Woodside crescent, Glasgow. *Council*, 1863-64. *Vice-Pres.* 1865-67.

Elected

1860 WILSON, ROBERT JAMES, M.R.C.P. Ed., 24, Grand parade, St. Leonard's-on-Sea, Sussex. *Hon. Loc. Sec.*

1865 WILSON, THOMAS, L.R.C.P. Ed. (exam.), Alton, Hants.

1868 WILTON, JOHN, L.R.C.P. Ed., Chalk Pit House, Sutton, Surrey.

1866 WILTSHIRE, ALFRED, M.D., 57, Wimpole street, Cavendish square, W. *Council*, 1870. *Hon. Lib.*, 1871.

1866 WINTERBOTTOM, HENRY, Consulting Surgeon to St. Mary's Hospital, Manchester; 56, Bury New road, Strangeways, Manchester.

1860 WISEMAN, WILLIAM WOOD, Springstone House, Ossett, near Wakefield, Yorkshire.

1860 WOOD, WILLIAM JAMES, Brightwaltham, Wantage, Berks.

1864 WOODMAN, WILLIAM BATHURST, M.D., Assistant Physician to the London Hospital; 10, Finsbury pavement, E.C.

1859 WORSHIP, J. LUCAS, Manor House, Riverhead, Sevenoaks, Kent.

1866 YEAMAN, GEORGE, M.D., 91, Sauchiehall street, Glasgow.

1870 YEATES, GEORGE, M.D., Walthamstow, Essex.

1861 YOUNG, WILLIAM BUTLER, 5, Castle street, Reading, Berks.

1869 YULE, JOHN S. C., 52, Bolton street, Bury, Lancashire.

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ADVERTISEMENT.

The Society is not as a body responsible for the facts and opinions which are advanced in the following papers and communications read, or for those contained in the abstracts of the discussions which have occurred, at the meetings during the Session.

OBSTETRICAL SOCIETY

OF

LONDON.

SESSION 1870.

ANNUAL GENERAL MEETING,

JANUARY 5TH, 1870.

Dr. GRAILY HEWITT, President, in the Chair.

Present—49 Fellows and 11 visitors.

The following gentlemen were elected Fellows of the Society:—Dr. Reuben Gross, New Brunswick; Dr. J. Ligertwood, Newbury; Dr. J. Scott, Sandwich; Mr. J. F. Wilkin, Folkestone; and Dr. Dorabjee Burzorjee, Bombay.

Dr. MURRAY exhibited for Mr. Propert an interesting and rare specimen of fibro-sarcoma (Virchow) of the right ovary. It had been removed after death from a lady in advanced years; and though its presence during life was detected, the nature of the tumour could not be decided upon.

The PRESIDENT exhibited a cephalotribe which had been presented to the Society by Dr. Kidd, of Dublin, and with it four casts of fœtal heads, of which Dr. Kidd wrote:—

"The casts were all taken before the instrument was

removed from the head after the operation. The heads have been caught in different positions, and they all seem to me to have special value, as showing that while the bulk of the head is greatly reduced by the flattening of the cranium, the base of the skull is turned edgeways between the blades of the cephalotribe, and not broken or doubled up. It is in this way put in the most favorable position for passing through a pelvis narrowed in the antero-posterior diameter.

"In one case an attempt was made to save the child by inducing labour at seven and a half months and turning, but the brim of the pelvis was found to be narrowed by an exostosis on the promontory of the sacrum, so as not to allow more than two and a quarter inches of available space. The head was perforated through the frontal bone, and the cephalotribe applied, when delivery was accomplished without force, and the woman made a perfect recovery. This was the third time she was delivered with the cephalotribe.

"In one case the head has been seized in the antero-posterior diameter. This head had been seized and crushed four times before it would come through the pelvis, which was very narrow. We always crush the head repeatedly till we can deliver without force.

"In one case the head is shown as doubled round on the neck. It was caught in the fourth position. This was a case in private practice, and in carrying it home to get the cast taken, the neck got the bend shown in the cast.

"I think the casts show that the straight instrument catches the head more in the middle than a curved one can do, and that there is consequently less risk of its slipping from between the blades when the pressure is applied.

"I have in my papers on the subject dwelt at sufficient length on the advantages of a straight instrument in allowing the head to turn into the most favorable position for extraction, and will not here allude to it."

The President said the best thanks of the Society were due to Dr. Kidd for this valuable addition to their Museum.

Dr. Ballard exhibited the ovary of a patient of Dr. Gibbon's in whom death had occurred from pneumonia shortly after an attempt at abortion. In the ovary was what Dr. Ballard believed to be a true corpus luteum, though the uterus exhibited no signs of pregnancy. It was referred for further report to a committee, consisting of Dr. Braxton Hicks and Dr. Madge, in conjunction with Dr. Ballard.

ON THE ADVANTAGES OF THE EARLY USE OF THE LONG FORCEPS.

By F. H. Daly, M.D.

Believing that many lives are lost by procrastinating the use of the long forceps in cases of contraction at the brim of the pelvis, I am induced to bring before the Fellows of this Society the two following most interesting and instructive cases. In the first case the forceps were used at a very late period, and the result was fatal to the mother, but the child lived. In the second case the forceps were applied at what some may consider too early a stage, and mother and child were both saved.

On the 21st of March, 1868, at two o'clock a.m., I was requested by my neighbour, Mr. Ryder, of Queen's Road, Dalston, to assist him in a protracted midwifery case.

On my arrival at the patient's house I learned from Mr. Ryder the following history:—Mrs. C—, æt. 25, a primipara, had been in labour for three days. He saw the case first in the afternoon of the 18th of March, when she had slight pains, which increased rather slowly, and the os did not fully dilate until the morning of the 21st, when the water also was evacuated, but the head made no advance through the brim of the pelvis. The friends of the patient objected to the use of instruments, and it was only at one o'clock a.m., on the morning of the 21st, that Mr. Ryder could

induce them to allow him to apply the forceps. Then Mr. Ryder tried a pair of intermediate length, but finding them too short, and not having a pair of long forceps by him, sent for me.

I found the patient in a state of extreme exhaustion, having scarcely any pains, and tossing about the bed, with a feeble rapid pulse and dry tongue. On examination the promontory of the sacrum projected considerably forward, preventing the head from even entering the brim. Having given the patient a couple of ounces of brandy (for the symptoms of exhaustion were alarming), I applied the long forceps, got them locked without much difficulty, and after about twenty minutes' traction, succeeded in delivering her of a living male child. The after-birth soon came down into the vagina, and was removed without any hæmorrhage; she was greatly exhausted after the delivery, but soon revived sufficiently for us to leave her, but she never really rallied, and died with typhoid symptoms on the 29th of March, eight days after delivery, and eleven days from the beginning of labour.

The second case also occurred in the practice of the same medical man—Mr. Ryder. The patient, a primipara, æt. 22, sent for her medical attendant on the morning of the 4th of June, 1868, at eight o'clock a.m. She had been having slight pains all night; he found the pains becoming stronger, and the os about the size of a crown piece, the membranes not ruptured. The woman was ill-shapen, and the pelvis peculiarly small, but having no appreciable deformity beyond the general smallness. Mr. Ryder visited the patient several times during the day; the os dilated somewhat, but got fixed between the brim of the pelvis and the child's head. He being satisfied that the head could not pass the brim, asked me to see the case with him. I found the pains very severe and long, and the woman getting very impatient; the os was, as stated above, fixed between the head and brim. So small was the pelvis, that we both feared the undiminished head could never pass; however, we determined to wait some time longer before

interfering. At 12.30 a.m. we again met, the case had altered in no particular, except that the patient was getting more and more restless. We therefore determined to give chloroform, and try the long forceps without further delay; but the patient, although most anxious to be delivered with instruments, would not have chloroform. I therefore proceeded to apply the long forceps without the anæsthetic; but in consequence of the extraordinary smallness of the pelvis, and the high position of the head, it was only after several failures that I succeeded in getting on the second blade and locking the instrument; then having tied the handles together I commenced making traction. For more than half an hour Mr. Ryder and myself, relieving each other, used traction with quite as much force as was justifiable, without making any very perceptible result, and it was nearly an hour and a half from the time I got the forceps locked, until I delivered her of a male child about the average size, having its head considerably and curiously elongated from the pressure and traction.

Mr. Ryder informs me that, upon his calling on the third day afterwards, his patient was sitting up in bed having a chop, and the child's head was the natural shape. She was up by the end of the week, and never had a bad symptom.

Remarks.—My apology for bringing these two cases before this Society is the fact that general practitioners, as a rule, delay much too long before applying the forceps, and especially the long instrument, and my belief that an expression of opinion by some of the leading Fellows of the Obstetrical Society would naturally have much weight, and induce a more early use of the forceps, when the head is *above* the brim of the pelvis, than is generally recommended in the text books, and, as a result, the saving of many valuable lives. I know, as a practical fact, that a large section of medical men only resort to the long forceps when the patient is *in extremis,* and as a consequence, if the patient survives an operation undertaken when she is in a state of exhaustion, she runs the risks consequent upon allowing the

uterus to wear out its contractile power, such as hæmorrhage, or the absorption of purulent or other poisonous matters.

The two cases strikingly illustrate these facts. I may just add that I have selected these cases because they occurred in the practice of another medical man, and not in my own, and he is quite of opinion with myself, that had the forceps been applied as early in Case I as they were in Case II, the result would in all probability have been equally successful. In conclusion, I may observe that in a number of cases in my own practice, in which I have used the long forceps, when perhaps some would say it was too early, I have never had cause to regret it, and never lost either mother or child.

ON THE SULPHO-CARBOLATES IN THE TREATMENT OF CERTAIN DISEASES OF CHILDREN.

By A. E. Sansom, M.D.,

PHYSICIAN TO THE ROYAL HOSPITAL FOR DISEASES OF THE CHEST, AND TO THE NORTH-EASTERN HOSPITAL FOR CHILDREN.

On December 4th, 1867, I announced to this Society that I had succeeded in producing a series of double salts of carbolic acid, which gave promise of being useful agents for the treatment of disease. Since that time I have, as far as my opportunities have permitted me, steadily studied and employed them with the hope of determining their position and value as therapeutical agents. I have always endeavoured to abstain from hasty generalisation, and from proclaiming their possible virtues with any sound of the trumpet. I hope, however, to have made out a "primâ facie" case for their employment in disease. The verdict must be left to time and to experience.

The prominent characters of this series of salts are beauty of crystalline form, perfect stability, and easy solubility.

They are formed by the union of sulpho-carbolic acid with the various oxides.

SULPHO-CARBOLIC ACID $(C_6H_5)\ HSO_4$ is formed when carbolic acid, liquefied by the aid of heat, and strong sulphuric acid are mixed in equivalent proportions. Much heat is evolved, and a syrupy liquid results, from which may be obtained long colourless needles of the pure double acid.

By neutralising this acid with the various oxides, the sulpho-carbolates are produced the characters of which I will only very briefly describe.

Sulpho-carbolate of sodium is obtained in colourless prismatic crystals, which exhibit a characteristic tendency to cohere in the form of rosettes. The crystals when pure give forth no odour of carbolic acid, and are not acted upon by the air; they are very soluble in water, and the solution has a saline and slightly bitter taste. *The potassium salt* possesses a slight amber colour, but its general characteristics are those of the sodium salt. *Sulpho-carbolate of ammonium* is in rectangular plates; the *magnesium* salt crystallises both in plates and needles. One of the most interesting salts of the series is the *sulpho-carbolate of calcium.* This occurs in the form of very fine light feathery crystals, much resembling benzoic acid. It is exceedingly soluble in water. This property is strikingly different to that of the lime salts in general. I know of none which approaches it in solubility. As I shall repeat hereafter, I think we may be able to take advantage of this property.

Of the metals proper I have obtained the following salts:—The *zinc sulpho-carbolate,* forming clear brilliant rectangular plates; the *copper salt,* in clear blue acicular prisms; the *iron sulpho-carbolate,* which is almost colourless, possessing only a very pale green tinge. It crystallises in rectangular plates. I have hitherto described this salt as of a purple colour. Mr. Hill, of Messrs. Balmers, has succeeded in obtaining it as I have just mentioned. I find that the colour is produced by an admixture with a persalt of iron.

The chief agent which lends importance to these salts is

carbolic acid. It forms one third by weight of the sulpho-carbolate of sodium, and enters in large proportions into the constitution of the others. The influx of daily evidence scarcely leaves room for doubt that in carbolic acid we have a valuable addition to our Materia Medica. Its properties as a disinfectant, as a means of keeping wounds free from decomposition, and as a preventive of suppuration, can now scarcely be denied. If we investigate the rationale of its action, we find its most characteristic property to be that of arresting or preventing any fermentive or putrefactive change. And this it accomplishes, not in virtue of any chemical properties, for it can be proved to influence chemically neither the putrescible matter nor the ferment, nor does it interfere chemically with oxidation or any known chemical change, but because it possesses the property of at once arresting the vitality of those organized bodies which are the intermediate agents between the putrescible material and the inorganic products of decomposition.

I do not intend to enter upon the question whether the *contagia* of those diseases which we term zymotic are really living molecules or no. On this point there must be difference of opinion. I prefer at the present to rest on less debateable ground. We can, I consider, be nearly, if not quite, unanimous in our conclusions: (1st) that putrefactions and decompositions of organic matter externally to our organisms are sources of disease. For this cause we use antiseptic and disinfectant measures. (2nd) That whatever the first cause of diseases, fermentations and putrefactions can occur within the living body. Fermentation of the ingesta gives rise to flatulence and dyspepsia, decompositions occasion fetid exhalations in diseases such as scarlatina, diphtheria, as well as in sloughing ulcerations; putrefying organic matter is met with in the throat or other situations. There is, therefore, nothing unreasonable in the hope that we may annul these processes within the living body as we annul them externally to it.

It must be distinctly understood, however, that these salts are far from being good antiseptics. It seems that the

stability of a salt of carbolic acid, and its power of arresting decomposition are in an inverse ratio. The simple carbolates seem equal in antiseptic power with carbolic acid itself, but these are exceedingly unstable. Sulpho-carbolate of sodium is ten times less efficacious than carbolic acid in arresting fermentation, and the salt has a very feeble action in arresting putrefaction.

When, however, a sulpho-carbolate is administered to a living animal, there is, according to my own deductions, the following series of actions: the salt is rapidly absorbed from the stomach without decomposition; in the tissues sulphate of soda is eliminated and carbolic acid set free, ultimately the carbolic acid escapes by the lungs, the sulphate of soda by the kidneys.

Carbolic acid itself has been administered as an internal remedy in a large number of diseases. In dyspepsia, especially of the fermentive kind, and in diarrhœa, it has proved of value. Although it has been employed in zymotic diseases, there has been no conspicuous evidence of its success. Many disadvantages attend it. It can only be administered in small doses (one to four grains), its aqueous solution is nauseous, it has a caustic action on mucous membranes, it forms variable compounds with oils, fats, alcohols, &c., which possess different actions to those of the agent itself.

The sulpho-carbolates are exceedingly soluble, and are administered with the greatest ease. I have given to an adult patient as much as a drachm (equivalent to nearly twenty grains of carbolic acid) of sulpho-carbolate of sodium every four hours.

I have never been able to produce toxic effects with the salt upon animals; on the other hand they readily take it mixed in large proportions with the food.

In diseases of defective assimilation I have generally observed concurrently with the administration of the sulpho-carbolates an improvement in nutrition and a subsidence of morbid signs. In tuberculosis there has been evidence of considerable general improvement. I shall more particularly note this when I come to mention the special employment of

the lime sulpho-carbolate. That the drug, however, has any direct action on tuberculous matter, or that it can arrest the morbid changes in tubercle once deposited, seems to be negatived by the facts.

Sulpho-carbolate of Sodium.—*Zymotic diseases.*—Apparently the most marked effects have been produced in scarlatina and analogous affections in which the throat is involved.

In the first case in which I employed the sulpho-carbolate of sodium in a throat affection, a gentleman subject to violent suppurative tonsillitis showed high fever, ulceration, inflammation, and great swelling of the tonsils—in fact, all the signs of his usual ailment which generally kept him a prisoner for ten days. To my surprise he was well and able to go to business in three days. In a similar case in a female I was able to predict perfect subsidence of throat signs by the end of four days. In cases of three children with ulcerative tonsillitis thus treated, the throat was well in one case in four days; the two others were not observed till the and of seven days. They were then well.

Sloughing ulceration—quasi diphtheritic.—The following is a condensed account of three cases which showed signs of great severity.

1. John Connor, æt. 7 years 6 months, seen after three days' fever, with ashy slough over right tonsil. Sulpho-carbolate of sodium 10 grains every four hours. Progressive improvement in all respects. Seventh day of treatment, ulcerated surface nearly cicatrised: patient feeling almost well. Perchloride of iron substituted.

2. Mary Baker, æt. 7, great prostration, large ashy slough covering left tonsil, enlarged superficial glands. Sulpho-carbolate of sodium 10 grains every four hours. Third day of treatment. Slough gone; thin layer of pus over ulcerated surface. Pulse 160. Temperature 106°. Regular improvement; tenth day greatly better; fourteenth day able to walk; mucous membrane perfectly healthy.

3. Amy Adams, æt. 13, a delicate child, seen after four days; sore throat; large ashy slough covered right tonsil. Pulse 124. Temperature 102°4. Ordered sulpho-carbolate of soda, fifteen grains every four hours.

Second day of treatment.—Throat distress increased; delirium. My colleague, Dr. Woodman, saw the case, but merely supplemented the treatment by ordering ice to be sucked. Pulse 140. Temperature 105°.

Fourth day of treatment.—Ashy slough on *left* tonsil now evident. No delirium. Sputa blood-stained. Pulse 112. Temperature 100°5; in the evening could swallow bread and butter.

Sixth day.—Sloughs entirely disappeared. Tonsils enlarged, but no inflammatory redness. Swallowed perfectly well. Pulse 96. Temperature 95°4.

Eighth day.—Eats well. No perceptible enlargement of neck glands.

Tenth day.—Very weak, but no other signs. Perchloride of iron substituted. Progress uninterrupted.

Scarlatina.—I have never used the sulpho-carbolate except in cases which presented at the onset signs of more than ordinary severity. Of fifteen such cases I have lost none. The observed effects I may briefly thus summarise.

1. *Rapid subsidence of febrile signs.*—In one case at my visit the rash which had been profuse had suddenly subsided; epileptiform convulsions occurred; there were tumidity of neck, extrusion of discoloured mucus from nose. My thermometer in the axilla rapidly rose to 105°, the highest point it was capable of registering. I gave a very unfavorable prognosis. As soon as the power of swallowing returned, ten grains of sulpho-carbolate were given every two hours.

The following day general improvement, rash profuse. Temperature 103°6. Throat signs severe.

Third day of treatment greatly better. Temperature 102°8.

Fourth day, perfect power of swallowing, child sat up and amused himself with painting. Recovery was uninterrupted. In another case (a girl of 7), wherein there was profuse rash,

and most complete desquamation afterwards, even while the rash was fully out, the patient was dressed and ran about the room.

The mean temperatures in a third case, wherein the throat signs were very severe, were, sixth day of fever, 104°, seventh day 105°, ninth day 101°, eleventh day 97°. Simple salines had been administered until the declaration of the rash.

2. *Quick alleviation of throat symptoms.*—In all cases no gargling nor other local treatment whatever was practised. They completely subsided, leaving full power of swallowing in five cases in *four days,* in three cases in *seven days.*

3. *Complete convalescence* took place in three cases in seven days; in one case in eleven, in another in fourteen, in another in fifteen days.

4. *Sequelæ.*—The only observed were in one case general anasarca; in one case albuminuria one day, disappearing the day following; in one case abscess of a superficial gland in the neck; in one case slight persistent glandular swelling without suppuration.

The results seem to my mind strikingly more favorable than those which I have met with under any other plans of treatment.

Sulpho-carbolate of calcium.—As I have said, the extreme solubility of this salt gives a primâ facie hope that it may be useful in rachitic disease. The cases in which I have employed it seem to give great encouragement.

In simple diarrhœa I have usually employed it in addition to the ordinary chalk mixture. The recovery has been prompt. I know of no exception.

In cases of malnutrition accompanied by purging, the results have seemed to me most satisfactory. I append a table of cases observed. The improvement in Nos. 1, 2, 4, 5, 6, 8, 9, and 10, was exceedingly marked. It can of course be objected that there is no proof that this improvement was *directly* due to the administration of the drug. Would results equally satisfactory have been obtained without its administration? My impression derived from other ex-

perience would be to the contrary; but on that point I seek the opinion of my professional brethren.

In some of these cases there were signs which tended to the diagnosis of a condition of tuberculosis. Is there any ground for the belief that the progress of tuberculisation may be stayed by the treatment? From collateral evidence, though there has been great improvement in the general condition of cases in which tubercle has been undoubtedly present, I do not think that tubercle once deposited is checked in its metamorphosis or hindered in its re-deposition. But, on the other hand, I think that there is fair evidence that, prior to the existence of distinct signs of deposition, in the dyscrasia which is oftentimes a sure forerunner, such systemic improvement may take place as to tend to an insusceptibility on the part of the body to the grave disease.

I shall be greatly misunderstood if it is thought that this communication is intended to establish the proposition that the sulpho-carbolates constitute the remedies, *par excellence*, for the diseases I have enumerated. I hope only that I have established a *primâ facie* case—that I have said sufficient to place them on their trial.

Sulpho-carbolate of Calcium.

		Age.	Disease and Symptoms.	Dose.	Adjuncts.	Duration of treatment.	Observations.
1	G. W.	1 year 4 months.	Rachitis; extreme malnutrition.	3 grs. 3 times a day.	Cod liver oil, ʒj.	days.	Great improvement; symptoms removed, and patient became quite a different child.
2	M. S.	2 years 6 months.	Ditto; diarrhœa; obscure râles over chest.	Ditto.	Ditto.	49 23	Recovered with very good nutrition.
3	W. C.	1 year 1 month.	Diarrhœa; wasting.	Ditto.	Ditto.	15	Said to be less powerless; but as the child appeared pale after taking each dose of the medicine, it was omitted.
4	N. K.	1 year 1 month.	Ditto; dysenteric symptoms, barrelled stomach.	5 grs. 3 times a day.	...	11	Great improvement; patient described by mother as "a different child."
5	A. B.	1 year 4 months.	Ditto; dusky countenance.	4 grs. 3 times a day.	Mist. Cretæ.	12	Purging stopped; appearance improved; omitted because bronchitis, coincident with dentition, became the chief symptom.
6	R. M.	2 months.	Wasting; screaming; hard stomach; patent fontanelles.	2 grs. 3 times a day.	Oil, ʒss, t. d. s.	30	Steady gain of flesh.
7	L. W.	5 months.	Ditto; constant diarrhœa.	3 grs.	Mist. Cretæ.		Much better; no purging; under treatment.
8	B. N.	1 year 3 months.	Ditto; heavy head; extreme malnutrition.	Ditto.	...	17	Became much more lively; appetite returned; child became exceedingly well and able to walk.
9	E. B.	1 year 3 months.	Pertussis; malnutrition; diarrhœa; local râles upper lobe of right lung.	4 grs. 3 times a day.	Oil, ʒj.	14	Great gain of flesh, which persisted after treatment was omitted; the child afterwards became a patient on account of the cough, but presented a wholly different appearance.
10	A. W.	7 months.	Pertussis; wasting; diarrhœa.	2 grs.	...	17	Progressive improvement.
11	E. B.	4 months.	Diarrhœa; wasting.	2 grs.	Mist. Cretæ.	7	Diarrhœa stopped.

Annual Meeting.

The report of the scrutineers of the ballot for the election of officers (Dr. Easton and Dr. Jones) was read, from which it appeared that the following list of office-bearers recommended by the council had been unanimously adopted.

Honorary President.—Sir Charles Locock, Bart., M.D.

President.—Graily Hewitt, M.D.

Vice-Presidents.—Constantine Holman, M.D. (Reigate), J. Charles Langmore, M.B., F.R.C.S., William Leishman, M.D. (Glasgow), Gustavus C. P. Murray, M.D., Edward John Tilt, M.D., Thomas Spencer Wells, F.R.C.S.

Treasurer.—John Braxton Hicks, M.D., F.R.S.

Honorary Secretaries.—Henry Gervis, M.D., W. S. Playfair, M.D.

Honorary Librarian.—John Jones Phillips, M.D.

Honorary Members of Council.—William Tyler Smith, M.D., Henry Oldham, M.D., Robert Barnes, M.D., John Hall Davis, M.D.

Other Members of Council.—William Braithwaite, M.D. (Leeds), Edward Copeman, M.D. (Norwich), Lawrence Trent Cumberbatch, M.D., J. Brendon Curgenven, M.R.C.S., Robert Ellis, M.R.C.S., George Gaskoin, M.R.C.S., Thomas Taylor Griffith, F.R.C.S. (Wrexham), Francis Seymour Haden, F.R.C.S., Edward Head, M.B., Jonathan Hutchinson, F.R.C.S., William Edmund Image, F.R.C.S. (Bury St. Edmunds), David Lloyd Roberts, M.D. (Manchester), William Richard Rogers, M.D., John Scott, F.R.C.S., William Johnson Smith, M.D. (Weymouth), Charles Taylor, M.D., Arthur Wynn Williams, M.D., Alfred Wiltshire, M.D.

The Report of the Auditors of the balance sheet for 1869 (Dr. Selby Norton and Dr. Wiltshire) was then read, which stated that the income of the Society for 1869 was £748

19*s.* 6*d.*, and its expenditure £633 10*s.* 4*d.*, leaving a balance in the treasurer's hands of £115 9*s.* 2*d.* It further appeared that the Society had invested in 3 per cent. annuities £1199 6*s.* 8*d.*, of which £75 had been invested during the past year. The adoption of the report was moved in terms of congratulation by Dr. Brunton, seconded by Dr. Heywood Smith, and carried unanimously.

A vote of thanks to the officers of the Society, mentioning especially the retiring officers, Dr. Meadows, Dr. Murray, and Dr. Playfair, was proposed by Dr. Hicks, seconded by Dr. Madge, and carried by acclamation.

Dr. Meadows, Dr. Murray, and Dr. Playfair, returned thanks.

The President then delivered the Annual Address.

Gentlemen,—The eleventh year of the existence of this Society has now come to an end, and it becomes my duty to say to you a few words—valedictory as regards the session now over, introductory in reference to that on which we are now entering.

It is to me an unfeigned satisfaction to be able on this occasion to congratulate you on the continued prosperity and success of this Society; to be able to state to you that the objects for which this medical fraternity was instituted still continue to be attained, and that we have every reason for believing that the hold which the Society has obtained on the goodwill of the profession is firm and likely to remain so.

The Society now numbers, including Honorary Fellows, as nearly as possible 600. The deaths and resignations are counterbalanced by the new elections. During the past year forty-three new Fellows have been elected into the Society. It is satisfactory that our numbers undergo no diminution, but it is even more so to find that our ranks are being constantly recruited by new levies. It is naturally among the younger members of the profession that we look

for additions, and it is a source of great gratification that the educational function of this Society is so highly appreciated by them.

Our obituary for the past year includes some well-known names; they are as follows.

Henry Edward Eastlake, Fellow of the King's and Queen's College of Physicians, Dublin, M.A. and Ph.D., Heidelberg, died after a prolonged illness in Paris, November 17th, 1869. Dr. Eastlake was a nephew of the late Sir Charles Eastlake, President of the Royal Academy. He had received his medical education in Edinburgh, and had also studied in Dublin, Würzburg, and Paris. Having enjoyed unusual opportunities for the acquirement of obstetric knowledge under eminent professors of this branch of the profession, Dr. Eastlake commenced practice in London, and filled in succession various public obstetric appointments—Physician-Accoucheur to the Marylebone Dispensary, Physician to the British Lying-in Hospital, &c.

Latterly Dr. Eastlake had retired from the British Lying-in Hospital. Dr. Eastlake contributed several papers to our 'Transactions,' "On Amaurosis in Pregnancy," "On the Management of the Third Stage of Labour," and a description of an instrument termed a drill crotchet, being the principal of these. His paper on the management of the third stage of labour is a very practical one, enforcing the great importance of external manipulation of the uterus as an aid to the separation and expulsion of the placenta. Dr. Eastlake's health was never very good, and an attack of typhoid fever followed by rheumatism left behind organic disease, of which he perished at an early age. Dr. Eastlake was undoubtedly a man of ability.

Henry Ewen, F.R.C.S., born 1804, died at Long Sutton (Sutton St. Mary's) September 15th, 1869. For the following particulars of his life I am indebted to his intimate friend Dr. Cammack, of Spalding. Mr. Ewen commenced his professional life as a pupil of Mr. Johnson, surgeon, at Wisbech. He became a student at Guy's Hospital in 1825.

In 1829, after passing the College of Surgeons, he entered

into partnership at Long Sutton with Mr. Wilkinson, who died soon afterwards, after which he succeeded to the whole practice. Mr. Ewen continued to practise at Long Sutton during the whole of the remainder of his life. He was elected Fellow of the Royal College of Surgeons in 1836.

Four sons only out of thirteen children survive him. Two of them, Mr. Arthur Benjamin Ewen and Mr. Algernon Ewen, have succeeded their father, with whom, indeed, they were engaged in practice at Sutton before his decease.

He contributed a very interesting case of transposition of the aorta, trachea, and œsophagus, to the 'Guy's Hospital Reports,' vol. v.

The disease of which Mr. Ewen died was carcinoma of the stomach, and which in his case certainly appears to have been hereditary.

On the 3rd of July, upwards of ten weeks previous to his death, he wrote :—" During the past two months I have been suffering from dyspepsia and severe gastralgia; for the latter I have several times been obliged to take some kind of sedative in the night, being unable to sleep on account of the severe pain at the stomach. I have not yet actually had vomiting, but many times it has been very nearly occurring. Of course I am thinner and much weakened, and not able to do all the work I usually attend to myself. My father's last illness commenced in this way when he was seven or eight years younger than myself."

Sickness and pain gradually increased, and he suffered most intensely before he sank.

The whole of his professional career was eminently successful from its commencement to its termination; and it is difficult to say in what branch he manifested most ability, skill, and knowledge.

A diligent student in early life, his habits of study continued to the last, and his acquirements on every point connected with the profession, as also on other subjects, were well known and appreciated by all who knew him.

A sincere Christian, without bigotry, he was honoured and

trusted by his numerous friends of every sect and party; and his loss is equally lamented by men of every shade of opinion, whether religious or political.

The uniform kindness with which he treated the poor and the attention he paid to their cases will long be remembered. His leading object throughout life, indeed, was the relief of suffering without reference to honour or emolument, though it is unnecessary to say how both follow such conduct.

Mr. Ewen joined the Obstetrical Society in 1861. He was one of those eminent country practitioners who at an early period recognised the utility of this Society by becoming connected with it. He has not passed away without doing faithfully and well his work in the world.

Crosland Richards, M.R.C.S. and L.M., the eldest son of Dr. Samuel Richards, of Bedford Square, and one of our oldest Fellows, joined the Society in 1862. He died April 18th, 1869, in consequence of an injury to the spine, caused by his horse falling on him, at the early age of thirty. Mr. Crosland Richards was educated at University College, where he filled the post of Obstetric Assistant with much credit, and exhibited great obstetric skill and knowledge. We all, sincerely I am sure, condole with his father, Dr. Richards, and his brother, Mr. Smith Richards, both Fellows of the Society, on their and on our loss.

Henry Scholfield Johnson, M.D. Aberdeen, residing at Congleton, Cheshire, died July 20th, 1868. Dr. Johnson's death occurred in the year 1868, but information of it had not been sent to us at the last annual meeting.

Dr. C. Somerville, of Bloxwich, Walsall, Staffordshire, died December, 1868. His death also was not mentioned at the last annual meeting, as it was not then known.

Mr. Charles Miles, of Craven Road, Paddington, died April 19th, 1869. Mr. Miles was educated at Bartholomew's Hospital, and filled the post of House Surgeon to that institution. He had also filled the appointment of Surgeon to the Farringdon Dispensary, and at the time of his death he was Surgeon to the Paddington Dispensary.

Mr. W. Alex. Russell, of St. Albans, died March 12th,

1869, at the age of fifty. Mr. Russell has contributed a case of hydatiform degeneration of the placenta, which will be found in vol. vii of our 'Transactions.'

Dr. John Locking died suddenly on November 20th, 1869, at Connaught Square. Dr. Locking was educated in Edinburgh and Glasgow. He formerly filled the post of Physician to the Islington Dispensary, but during the last two years of his life he had been Physician to the British Lying-in Hospital.

Dr. Robert Dyce, one of the Senior Physicians and Professor of Midwifery in the University of Aberdeen, died on January 11th, 1869, of acute inflammation of the lungs, at the age of seventy.

The father of Dr. Dyce was an eminent medical practitioner in Aberdeen. Dr. Dyce was educated in Aberdeen, studying also in Edinburgh and London. He then entered the Army Medical Service, and in 1821 went out to the Mauritius on a staff appointment under Sir Lowry Cole. There he remained five years, and then accompanied Sir Lowry Cole to the Cape, where he resided for five years. During this period of his life he combined with an assiduous and skilful discharge of professional duty an ardent study of the natural history and the medical peculiarities of both these colonies, until then imperfectly investigated. Dr. Dyce was, in fact, an ardent student of natural history, as his contributions to the fauna and icthyology of the Mauritius and the Cape abundantly prove. His father dying in 1836, Dr. Dyce was induced to relinquish the life to which he had become much attached, and in order to contribute better to the maintenance of a widowed mother and other members of a large family, to follow his father's practice in Aberdeen. He then devoted himself to the practice of Midwifery, and with great success; for in 1841 he was appointed lecturer on that subject in Marischal College, and on the union of the two Aberdeen colleges into an university in 1860 Dr. Dyce was made the new Professor. For a period of thirty years Dr. Dyce practised in Aberdeen, enjoying the reputation of a distinguished and assiduous cultivator of obstetric science, a

perspicuous teacher, a successful practitioner, and a man of kindly and humane disposition.

Dr. Dyce's contributions to obstetric literature have the character of preciseness and practicality. The following is a list of the principal of these:—"On the Spontaneous Expulsion of the Fœtus," 'Month. Journ. of Med.,' &c., 1855. "Case of Cæsarean Section," 'Ed. Med. J.,' 1862. "On the Postural Treatment of the Funis," 'Med. Times and Gaz.,' 1866. "On Polypus Uteri," 'Ed. M. J.,' 1867. "On Puerperal Convulsions," 'Brit. Med. Journ.,' 1868.

Dr. C. D. Meigs, an Honorary Fellow of this Society, Professor of Obstetrics in the Jefferson Medical College of Pennsylvania during twenty years, died suddenly at his residence in Philadelphia, on June 22nd, 1869.

Dr. Meigs was a very distinguished ornament of his profession and a most remarkable man. In our department of medical science, to which Dr. Meigs devoted his great talents, he has left an imperishable memento in his numerous contributions to obstetric literature. During his life his fame and renown as a teacher and practitioner were unrivalled in the American Continent; our transatlantic cousins had indeed reason to be proud of him, as one combining great knowledge of his subject, a wide acquaintance with medical literature, an extreme fondness for exactness and truth in clinical observation, and a considerable degree of originality.

His principal literary contributions have obtained a world-wide celebrity. They are a 'Treatise on Midwifery' which has gone through several editions, a work entitled 'Females and their Diseases,' an 'Essay on the Acute and Chronic Diseases of the Cervix Uteri,' 'Letters on Childbed Fevers,' and a tract on 'Certain of the Disorders of Young Children.'

It is impossible to read any of Dr. Meigs' writings without becoming infected, I may say, with a degree of enthusiasm in reference to the subject treated. Acuteness and force, and a vehement desire for the truth, are his great characteristics as a writer, while his works overflow with a liveliness most unusual in medical dissertations—a liveliness which is some-

times overstrained indeed, but which, nevertheless, constitutes an attractive feature.

Personally, I must confess to a great admiration for Dr. Meigs; a passage of his on the subject of diagnosis, some years ago, arrested my attention. "Diagnosis," says Dr. Meigs, "is in practice like Captain Greatheart in Bunyan, encountering and overthrowing all obstacles, so that even Apollyon himself could by no means oppose a bar to his habit in his practice of succeeding always." Indeed, here we have the key to Dr. Meigs' character. So devoted was he to clinical investigation, so devoured, so to speak, with the idea of seeing and investigating for himself, that an intimate friend of his, as Dr. Meigs relates in the preface to one of his works, thought it necessary to point out to him the error he was committing in neglecting the study of older writers—an error he at once admitted and set to work to rectify in his usual energetic manner.

His essay on the 'Diseases of Women' is a most interesting one; his accuracy of observation is everywhere recognised, and there are few facts which have escaped his searching investigation.

His work on 'Childbed Fevers' is a masterly, historical, and critical resumé of the subject. Bloodletting is with him *the* remedy for puerperal fever, and he strongly advocates its employment and its efficacy when used at the very onset of the disease. Dr. Meigs' views in this respect would meet with little support at this day, but his arguments are stated with much vigour, and his cases are given with great candour.

Of the *financial* position of the Society I now say little. The report read to you by the Treasurer must be considered a most satisfactory one. Our funded property is now £1106 5*s.* 4*d.*, while the balance at the bankers is £115 9*s.* 2*d.*

The attendances at our meeting must be regarded as in some degree a test of our efficiency. I find that, allowing for certain exceptional events in our past history and which attracted an unusual concourse of Fellows, the average attendance of Fellows and Visitors for the eleven years the

Society has existed has been fifty-two at each meeting. During the past year, 1869, the average attendance has been fifty-five.

What must be still considered a new feature in the Society is the existence of a Library and Museum of instruments open and accessible to the Fellows. The Library, which now contains 1225 volumes, will shortly become a Library of Obstetrics worthy of the Society, care being taken to add all the best works as soon as published. The number of Visitors to the Library during the past year was 597, as contrasted with 470 for the previous year. There is no doubt that when it becomes more thoroughly known to the Fellows, the Library will be largely resorted to by them. The Museum of Obstetric Instruments, also well and carefully arranged under the direction of Dr. Meadows, forms an important *annexe* to the Library. The Society is under a great obligation to Dr. Playfair, on whom has fallen the duty of organizing and preparing the Library, for no one who has visited it can fail to see that the work has been done efficiently and well. There is the greater reason for alluding to this on the present occasion, as Dr. Playfair has after three years of office vacated the office of Honorary Librarian.

The papers and observations communicated to the Society during the past year have been both valuable and interesting, and many of them have been the means of introducing to the Profession innovations or improvements in matters relating to Obstetrics. The Society has had laid before it extremely important papers from Dr. Braxton Hicks, Dr. Matthews Duncan, and Dr. Barnes on the subject of cephalotripsy, the general result being to satisfy the Society that this operation is one which should be fostered and practised in suitable cases, while as regards the instrument itself, we have had before us ocular proof that Dr. Braxton Hicks' improved cephalotribe possesses powers and advantages as regards portability which entitles it to very high commendation. The question of uterine hæmorrhage after delivery—one profoundly interesting to us—has been handled by Dr. Barnes in a paper which was listened to with great attention, the

Society endorsing, in certain appropriate cases, what must be regarded as a novelty in obstetric practice, viz., the employment of the tincture of iron within the uterus, when other means fail to arrest the flow of blood. Dr. Tyler Smith has communicated to the Society a case in which the novel procedure of injecting ammonia into the veins in the treatment of puerperal fever was adopted, the patient recovering. The propriety and value of this operation awaits further consideration.

A very practical question has for the first time been debated in the Society during the past year, viz., the question of the treatment of cases when pregnancy is complicated by the presence of an ovarian tumour. A case related by Mr. Warn, where the labour at full term resulted in death from rupture of the cyst, excited a full discussion; and from Dr. Braxton Hicks and Mr. Spencer Wells we have had valuable contributions towards the settlement of this point. It may I think be stated that the general conclusion was in favour of tapping the cyst during the pregnancy, when the cyst is very large and manifestly likely to interfere with parturition. It has also been shown that it is possible even to excise the ovarian tumour during pregnancy without necessarily destroying the patient. On the other hand, it would appear that a considerable number of cases where this complication exists do well without any interference. It is plain that this is a question concerning which must be left to the individual judgment.

A very unusual case of large fibroid tumour of the uterus, simulating ovarian disease, was related to the Society by Mr. Spencer Wells; and I allude to this case more especially, inasmuch as the patient appears to have died of hyperfibrination of the blood, a condition which would seem to have been met with in several cases of death after ovariotomy during the last year or eighteen months. The cause of this peculiar hyperfibrination we do not seem to have arrived at, and the subject is one requiring further investigation.

Then we have the new embryotomy operation by Dr. Barnes, the essential feature of which is the cutting the head

into pieces by means of an écraseur armed with a very strong steel wire, a procedure ingenious, novel, and original, but so far the operation has not been tested on the living body.

An elaborate essay on "Puerperal Convulsions," by Dr. Hall Davis, awaits careful perusal in the forthcoming volume of 'Transactions.' The result of improved treatment in reducing the mortality from this disease is well shown in this paper.

Many other subjects have been discussed at our meetings —the pathology of dropsy of the amnion; the laws regulating the sex of twins, by Dr. Brunton; adhesions of the gravid uterus and their influence in causing post-partum hæmorrhage; cases of extra-uterine fœtation; fatal hæmorrhage from rupture of varix of the vulva after labour; aids in parturition by an obstetric back supporter, exhibited by Mr. Woodman, and a "pelvic band" exhibited by Dr. Protheroe Smith; an essay on the employment of the whalebone loop, by Dr. Westmacott. These are the more solid of the materials brought before us in the ordinary way, to say nothing of several interesting pathological contributions.

The diseases of infants is a subject which has only recently, owing probably to the press of other matter, been seriously considered by this Society. During the last year, however, the report of the Committee appointed by the Society at the instigation of Dr. Farr to investigate the causes of infant mortality in England was read. This Committee, consisting of Dr. Hall Davis, Dr. Tyler Smith, Dr. Barnes, Dr. Meadows, Mr. Curgenven and myself, with the Hon. Secs. Dr. Murray and Dr. Gervis, was appointed in February, 1867, but was unable to set to work at once. In June last, however, the Committee presented to the Society the results of its investigations, and a paper ably and carefully drawn up by Dr. Gervis embodying those results, was read before the Society. Dr. Farr was present, and expressed himself as highly pleased with the information the Committee had been able to accumulate on the subject. The paper in question, supplemented by additional facts since collected, will appear in the forthcoming volume of 'Transactions. It is

contemplated that the Committee formed for the purpose of making this investigation may be able to draw up certain useful regulations or recommendations respecting the management and feeding of infants, and thus tend to diminish that great mortality which at present prevails in our infant population. In connection with this subject, it should be mentioned that Dr. Selby Norton, in a paper read before the Society, has forcibly drawn attention to the injurious effects of a starch diet on infants.

A review of the obstetric work seen during the past year would certainly be incomplete if limited to that done in this our own Society. The Dublin Obstetric School has for a long time had a great renown, and the Obstetrical Society of Dublin has during the past season been the arena of a discussion of a most interesting character, and destined in all probability to exercise a very important influence in the future. I allude to the discussion elicited by Dr. Evory Kennedy's paper on "Puerperal Fever." Dr. Kennedy attacked the Lying-in-Hospital system carried out in Dublin in a paper of remarkable force, his arguments being directed to show that the aggregation of lying-in patients is productive of puerperal fever, and that a system of isolation should be substituted for the one now practised. The paper attracted much attention, and for ten nights the Obstetrical Society of Dublin discussed this subject. Many of Dr. Kennedy's deductions were impugned, but substantially there can be no question that Dr. Kennedy made out his case. One result has certainly been obtained—a most important contribution to the history of puerperal fever in Dublin, together with the opinions and deliberate criticisms of the many eminent obstetric practitioners of Dublin on this subject. It would be impossible for me in this place to summarise even briefly this discussion, characterised by an exhibition of brilliancy, pungency, profundity and wit, such as could be witnessed nowhere but in the Irish metropolis.

A noteworthy fact relates to the extension of the operation of ovariotomy. Dr. Sven Sköldberg, of Stockholm, who may be recollected as our visitor at our exhibition of instruments

in 1866, has recently sent me a tabular statement, from which it appears that he has in Stockholm operated on not less than 20 cases with a result of 17 recoveries and 3 deaths.

In reference to the general position of obstetrics the past year has witnessed changes in which we may congratulate ourselves. The Council of the College of Surgeons has, on the motion of Mr. Curling, made an examination in midwifery compulsory in all who obtain their diploma. The crying evil arising from the absence of this regulation, and which so long ago as the year 1859 was made the subject of a memorial from this Society to the Medical Council, has thus been remedied, and we may fairly claim a share in bringing this about.

Here also I may allude to an attempt which this Society has made during the past year to amend the composition of the General Medical Council in such a manner as to have therein a more adequate and direct representation of obstetric practitioners and teachers. It will be recollected that at our last annual meeting a resolution was carried expressing the sense of this Society as to the necessity of effecting a change in this respect. Accordingly a memorial was drawn up by Dr. Barnes at the request of the council of the Society, and on May 11th a deputation from the council associated with Dr. Lyon Playfair, Dr. Lush, and other members of parliament waited on Mr. Bruce, the Home Secretary, and made a representation to him on the subject. We trust that when an opportunity presents itself, our suggestions to the Home Secretary will not be without their effect, and that in due time obstetrics will cease to be unrepresented in the General Medical Council.

Another important question has for the second time been occupying our attention. During the past year the propriety of amalgamating the chief medical societies in London has been discussed. We have had a special meeting of this Society, held in June last, the result of which was the appointment of three delegates, entrusted with certain resolutions adopted at the special meeting, to confer with

delegates from other Societies on the question. The matter is still under deliberation, and as yet no definitive result has been arrived at by the committee of delegates. I need not say that this is a matter vitally affecting our Society, and that in our present position, hardly earned and fought for as it has been, care must be taken that our future interests be not imperilled. It may be safely asserted that what is good for us separately is for the benefit of the profession of which we form a part; unquestionably also it is our duty to offer no unreaonable opposition to well-considered projects for the elevation of the profession as a whole in public estimation.

Thus far, gentlemen, for what relates to the past. That the efforts of this Society to advance obstetric science and to elevate our branch of the profession have thus far been successful is admitted on all hands, and the language of eulogium has been liberally applied to us. Indeed, some of our critics and friends seem to have come to the conclusion that we have so diligently worked our mine that it must be exhausted. It would be a great pity and an infinite damage to the interests we all hold dear if this idea should become prevalent outside the Society. Those who are acquainted with the working of the Society will at once see the incorrectness and the irrelevancy of such a conclusion. This is, indeed, the doctrine of finality with a vengeance!

True it is that in obstetric practice certain great principles have been grasped which seem unlikely to undergo change, but the mode of application of those principles in practice is susceptible of infinite improvement, each step in advance being the saving probably of many lives. The obstetric art proper admits, we may rely on it, of yet further *cultus*, and the unceasing advances in physiology, dietetics, and epidemiology find, all of them, their special and appropriate adaptation to the peculiarities of obstetric practice, adaptations which we must be constantly prepared to make available. Apart from this consideration, however, certain portions of our mine have as yet been comparatively untouched; the diseases of infants having, as I have already stated, simply from press of other matter, occupied far less of the

attention of the Society than the subject deserves. That we are in the way to remedy that state of things will be sufficiently apparent from what has been just now stated in reference to the work of our Committee on Infantile Mortality.

But there is another point of view in which this question must be regarded. This Society exists, not simply for the purpose of discovering new facts and new principles; it has another function, and one not likely soon to cease, viz. the dissemination of these principles, in other words, the education of the rising generation of practitioners. This Society is eminently a teaching Society, offering opportunities for that correction and verification of experience which is so invaluable to those whose experience is limited, upholding also what is right and exercising a wholesome influence on the entire body of obstetric practitioners. The dispelling of ignorance means the saving of life; having that end in view we can hardly fail to do what is right and what is best.

I cannot conclude, gentlemen, without expressing personally my thanks to our Honorary Secretaries, Dr. Murray and Dr. Gervis, for the zealous and efficient manner in which they have assisted me in carrying out my presidential duties during the past year. To you also I would desire to convey my sense of the kind indulgence you have extended to me in the performance of those duties.

A vote of thanks to the President for his admirable address was proposed by Dr. Tilt, seconded by Dr. Ballard, and carried unanimously.

FEBRUARY 2ND, 1870.

Dr. GRAILY HEWITT, President, in the Chair.

Present—52 Fellows and 7 visitors.

The following gentlemen were elected Fellows of the Society :—Dr. Mark Long ; Mr. W. J. Pilcher ; Mr. Logan D. H. Russell ; Baron Paul von Seydewitz, M.D. ; Mr. J. Davies Thomas ; Mr. Alexander Towne, jun., and Mr. Frederick Wallace.

Dr. WILTSHIRE exhibited an ovarian tumour removed by him a few days previously, and alluded to a plan of treating the pedicle by means of a long acupressure needle, which Sir James Simpson informed him he had adopted with success.

Dr. Wiltshire proposed entering into some general consideration as to the treatment of the pedicle, but owing to the length and importance of the chief papers of the evening, he deferred his remarks.

CASE OF CICATRICES FROM A BURN REQUIRING DIVISION DURING LABOUR.

By EDWARD F. WILLOUGHBY, M.B. Lond.

Mrs. M—, æt. 23. When a child, having been found by her mother lighting a fire in the yard, she, to conceal it, stood over the burning wood, and was so severely burnt that her life was in danger.

I first saw her, in consultation with Mr. Buxton, of Compton Terrace, at half past eleven on December 5th. There were extensive scars on the inner sides of the thighs and around the pudenda, which were quite devoid of hair. When the thighs were widely parted, their abduction was checked by a broad fold or web of integument, not very apparent in the natural position, containing a strong band of fibrous tissue, which it was evident would during the distension of the perineum arrest the progress of the fœtal head. As she was within a month of full term we agreed to induce labour, and for this purpose ruptured the membranes and gave a dose of castor-oil and of ergot. The perineal band alluded to, rendered it very difficult to reach the os uteri. At three o'clock I was sent for, and found her in hard labour, the head, large and well ossified, distending the perineum, but arrested by the band, which was tightly drawn across it about an inch from the posterior margin of the vulvar aperture, and threatening momentary rupture of the perineum. I divided the band completely on one side, the cut ends at once parting widely. On the other I could not do so entirely, for it was so closely adherent to the vaginal wall, that the attempt would have opened a button-hole into the vagina. I therefore divided it again rather on that side of the middle line.

The head now advanced, but the vulva would not dilate in the least, its posterior margin being of cartilaginous toughness. Four incisions in the margin gave some room, but they showed not the least tendency to extend. Guiding the head well forward, I enlarged the incisions from time to time, just as much as was necessary, until in little more than three quarters of an hour she was delivered of a living female child, four hours from the time at which we ruptured the membranes, when my friend arrived, surprised and disappointed at having come too late to take part in the delivery.

The wounds healed well, and Mr. Buxton endeavoured to prevent the re-union of the fibrous band by means of oiled lint, &c. Incisions in the perineum are, of course, not

unusual, but the interest of the case lies in the origin of the cicatrices and the presence of white fibrous band resembling tendon in structure and appearance.

Severe but not fatal burns in this particular region are certainly not often met with.

Dr. Murray remarked that the paper just read was one of much interest, the case described being of rare occurrence, and requiring a special mode of treatment. He had some two years ago seen with Mr. Pierce and Mr. Lemon, of Notting Hill, a case where, from a burn, the result of scalding (when the lady was a child), the whole perineum and lower half of the vulva was converted into a firm unyielding cicatrix. The lady was in labour, and the fœtal head had advanced as far as it possibly could, a portion of the scalp showing itself to about the size of a two shilling piece. Dr. Murray, with the consent of Mr. Pierce, divided laterally with a bistoury the upper and sound portion of each labium to the extent of nearly two inches. The head at once passed, and the patient was delivered of a living child. Two silver wire stitches on each side brought the cut surfaces together; and Dr. Murray has since heard from Mr. Lemon that the case progressed and terminated satisfactorily. Dr. Murray had performed this operation with perfect success once before, to save a perineum which had given way at a previous labour, and had subsequently been restored by an operation.

Dr. Bathurst Woodman then said that, by the kind permission of the President, he wished to make a few remarks on the administration of iron-salts in anæmia complicated with pregnancy. For the last nine years he had given one form or another of chalybeates without any fear of producing abortion, and he had never seen any ill results from the practice, on the contrary, very great good had resulted. In this he had followed the example of the late Dr. Ramsbotham, and also of Dr. Robert Barnes and others. Of course care must be taken to give the steel in such a way as not to upset the stomach and cause vomiting, and he therefore preferred in many cases to administer the ammonio-citrate in an effervescing form. But he had often given the perchloride, the carbonate, sulphate, and

other forms, and always without ill-result. He was therefore greatly surprised the other day to hear a medical practitioner in Mile End attribute an abortifacient effect to a simple effervescing mixture, with ten grains of ammonio-citrate of iron. Indeed, he told the jury so, who were summoned to an inquest on an illegitimate child, who was prematurely born (at the eighth month) without assistance. The mother had been an out-patient at the London Hospital, under the care of Dr. Fenwick, and was seen by Dr. Woodman for that gentleman. Dr. Fenwick, however, fully concurred in the treatment. The medicine had been taken nearly three months with great benefit. No mention of abortifacient properties in preparations of iron was made in Dr. Pareira's, Drs. Royle and Headland's, Dr. Sydney Ringer's, or other works on materia medica and therapeutics to which he had access. Dr. Taylor, indeed, mentions that some of them have been *taken* for the purpose, but so has almost every conceivable substance.

The President said that probably all practitioners were in the habit of prescribing iron in the anæmia of pregnancy, and that he had never witnessed bad results of any kind.

ON A REMARKABLE CASE OF ABSENCE OF VAGINA, WITH RETAINED MENSES IN UTERO AND FALLOPIAN TUBES.

By Charles H. F. Routh, M.D.

SENIOR PHYSICIAN TO THE SAMARITAN FREE HOSPITAL; CONSULTING PHYSICIAN FOR DISEASES OF WOMEN TO THE NORTH LONDON HOSPITAL FOR DISEASES OF THE CHEST; FELLOW OF UNIVERSITY COLLEGE, ETC. ETC.

On the 18th of December, 1869, Miss Garrett brought me a patient to examine, who had applied to her for medical advice at St. Mary's Dispensary. She was a remarkably finely developed girl, with full mammæ and stature, looking some

25 years old. She was however only 14. Her sister, who accompanied her, was an equally fine girl, and had begun to menstruate at 13. Their mother had begun at 17, but had stopped for twelve months before she became regular.

It was a week after Good Friday, 1868, that she first had some uterine pain, which went right through to the back. These pains were sometimes so violent that it appeared to her as if the "whole of her inside" would come out. They lasted a week, and then went off altogether. In about five weeks more they recurred. She experienced exactly the same symptoms, which lasted again a week, and then disappeared. Every five weeks the same train of symptoms, with the same duration, occurred regularly. Between the last time however they recurred, and the previous time, an interval of eight weeks had elapsed, during which period she was free from pain. Being, however, called upon to work rather hard all the symptoms again recurred. The breasts began to enlarge about a year ago. At present they were unusually developed, with wide and marked areolæ, but without follicles, nor much discoloured. Had never noticed any discoloration of blood about the pudenda; all she had noticed was occasionally some incontinence of urine.

An examination locally revealed an unusual state of things. The mons veneris and clitoris were well developed, also external labia with a full quantity of hair. There was no vagina, but a sort of cæcum, certainly not longer than half an inch, if that. Superiorly was the urethra, which was dilated so as to admit the little finger, into which a catheter introduced drew off the urine. On examination per anum, about two inches up, the finger came across a large tumour about the size of a large child's head, fluctuating, in one part apparently *very thin*, giving one the idea, if forcibly handled, it might burst. This tumour could be made to play on the finger of one hand in recto, by slight pressure made with the other hand two inches above the pubis. A sound being now placed within the bladder and pressure made on the finger in recto, the intermediate membrane appeared to be

about one eighth of an inch thick, which was supposed to be made up of the floor of bladder and superior wall of rectum with very little vaginal tissue.

The result of our joint investigation and consultation was that both Miss Garrett and I agreed as to the necessity of an operation, which should not be delayed. We advised her not to go back to Colchester, lest the railway shaking should cause the tumour to give way. That operation we thought should be *two*fold, 1st, puncturing the tumour through the rectum, to relieve the tension, and, 2ndly, to proceed to attempt to make a new vagina.

I was much annoyed, however, to find that our advice was not taken. The poor girl, who was unusually sensitive, was frightened, and the same day returned to her home in Colchester, and it was only through the advice of her medical attendant, Mr. Maurice Manthorp, of Thorp, Colchester, that she at last became an inmate of the Hospital, on January 7th, 1870, just three weeks after I had seen her. The patient, however, was rather dispirited, bowels very constipated, and it was the 13th before the necessary consultations with my colleagues could be held, and her state of health enabled me to proceed to operation.

My own opinion was unchanged. I wished to relieve the uterus per rectum first, but my colleagues, Dr. Savage, Dr. Greenhalgh, Dr. Rogers, and Mr. Wells thought it best to make an operation of it, *i. e.*, to make the vagina first and empty the uterine contents through the new passage.

The patient having been placed under chloroform, and assisted by Drs. Rogers, Day and Bantock, I made an incision about half an inch below the dilated urethra, laterally about half an inch wide, through the mucous membrane. This I dissected up carefully, and partly by cutting with the knife held flatly, and partly with a blunt instrument, I succeeded in separating about one inch of the tissue between the bladder and rectum. I should say, to guide my incisions, I had one finger in the rectum, and the bladder was pulled upwards by one of my assistants by a catheter in urethra. I now introduced my right index finger into the

wound, which bled very freely, and with a little management I forced the entire finger in till I reached the uterus, which felt as a hard scarcely moveable mass, and certainly very much less fluctuating than it did per anum. The sensation to my finger as the tissue gave way under my finger was very like that of skinning an animal or of working under a fascia. The vagina also so made appeared to bend at its distal end downwards and backwards. The uterus gave me the idea when I first impinged upon it with the finger as being perpendicular to my finger, but about half an inch below this, as the tissues gave way in the downward direction, I felt a little depression, which seemed to me to be the closed os uteri; but this depression was situated so closely to the rectum that I did not dare to perforate the uterus here, but thought it much more prudent to do so rather at the first point reached, which now appeared to be about 3 to 3½ inches from the vestibule. I did not venture, however, to perforate perpendicularly, but by a trocar bent downwards, because the anal examination enabled me to make out, as I thought, that the posterior and inferior part of the uterus bulged out considerably backwards and downwards. A very thick dark crimson fluid now exuded, but very slowly. Its exit was helped by an injection of a weak warm watery solution of iodine. A large gum elastic catheter was next substituted for the trochar and fastened *in situ* with tapes, and the patient put to bed.

The progress of this case was at first very unsatisfactory, owing to excessive sickness, doubtless due to the chloroform given. The first day the pulse ranged from 108 to 120. Skin hot and dry; very thirsty, and could keep nothing down. Ice, champagne were given, but with trifling advantage. Towards night I administered a mixture consisting of Liq. Ammon. Acet. ʒj, Tr. Aconiti ♏j, Acidi Hydrocyan. dil., ♏v, in water, every three hours.

The next day the sickness was very little better, but the patient had kept the medicine down, and was sweating profusely. There was some pain over the hypogastrium. Pulse was, as before, irregularly quick. The uterus was

discharging the same matter freely. The same warm iodine solution was used as an injection to dilute the thick fluid and the new vagina which was roomy was washed out with carbolic acid. The catheter was removed and a larger one applied. The uterus felt hard but smaller. At night she was certainly better. Pulse 108, except when about to be touched; when it rose to 156. The abdominal tenderness over uterus was considerable. A large blister applied.

The third day the blister had risen very well. All abdominal tenderness gone. Pulse 108 to 120. Expresses great comfort at the local washings. Still no appetite; good deal of thirst; less sickness; sweating profusely.

The fourth day felt better, still sweating, less sickness. Slept very fairly. Has taken a little tea and toast. The fluid coming per catheter is now only mucus. The iodine injection comes away unchanged and with a gush, as if forced out by a muscular contraction.

The fifth day. States she feels much better. Bowels freely relieved by an injection; no sickness. Pulse 108. A small dose of castor oil given. Catheter removed. Vagina, as before, washed out twice a day with solution of Carbolic acid.

The sixth day not so well. Feels more feverish and thirsty, and a little sick. No local pain. Skin moist. Freely perspiring; uterus, felt through new vagina, smaller, but hard and fixed. Pulse 108—120.

Seventh day much as before. Towards the middle of the day the patient was rather frightened by noise in an upper ward, and said she felt as if something had turned completely in her inside,—not in the wound, but in and about the umbilicus. Pulse was irregular and rose to 160. Towards evening I observed that the facies had become more drawn and pallid. About 10 p.m. she became again very sick and again said she felt all wrong in the belly, but not where I had operated. The wound was not painful, nor offensive in any way. Her pulse was very rapid and irregular. The whole aspect of the patient was indicative of shock and internal hæmorrhage. At 12 p.m. delirium cum tremore came on. She was

pulseless, very violent, extremely pale, and wishing continually to get out of bed. She absolutely refused all brandy, imagining the nurses and I were conspiring to poison her. At 2 the respiration became stertorous, and she died at a quarter to 3 a.m.

Post-mortem twelve hours after death.—Rigor mortis present. Body well nourished. Mammæ remarkably large. Heart rather large, but free from clot on either side.

On opening the peritoneum there were slight adhesions of the omentum, but no redness of intestines. The moment the omentum was lifted up, a quantity of chocolate-coloured grumous fluid was observed spouting up from beneath the intestines, in the neighbourhood of right iliac and right femoral artery. On lifting up the intestines, this was found to be coming up from the posterior cul-de-sac. The quantity was a full tea-cup full. The uterus was large, about four to five inches long, and flattened from before backwards. The fluid was found in no way to come from the proximity of the wound. The new vagina appeared to occupy the normal position, at the extremity of which the opening made into the uterus could be felt. On close examination, both Fallopian tubes were found dilated, that on the left side to about the size of a pigeon's egg, full of fluid, but which could not be forced by squeezing into the uterus. The dilatation in the right Fallopian tube was sloughy looking, and perforated on its inner side, and about the size of a small orange. From the aperture in it, which admitted a sound readily, a quantity of the same kind of grumous fluid as that found in abdomen could be observed exuding.

Sequel.—On examination of the tumour now before you, you will see superiorly the bladder, which is rather capacious, and inferiorly the meatus urinarius, which is unusually wide. Lowest of all, is the rectum and sigmoid flexure, of normal appearance and size. Between the two, and apparently in the normal position, is the new vagina, large enough to admit the

index finger, at the end of which is the opening made in utero and still patent. Looked at from behind you have a large uterus, the parietes of which are of more than ordinary thickness. The cervical cavity especially bulging, but free from any menstrual fluid, on anterior surface of which is the inner opening of the trochar puncture. The left Fallopian tube or ovary is dilated, but the assistant who removed it from the body, unfortunately broke it off in its connection. This accident has not occurred in the right and ruptured side, but this is much larger. A probe of ordinary size cannot be passed into either Fallopian tubes. Thick as the fluid was, and looking to the comparatively undilated condition of the upper part of the uterine cavity, it could not have passed from the tube to the uterus.

Remarks.—Among the few cases of absence of the vagina recorded, I do not find any in which the case exactly resembled this, and in which the vagina was made, and the uterus punctured at the same time,—sponge tents having been used after incisions made, and the progress of the operation extended over several days. In several of these also the bladder was punctured.

In one case, quoted by Bernutz and Goupil from de Haen, however, the symptoms appear to have been exactly similar to those in this case, also in the cause of death. For although the operation was unsuccessful in relieving the uterus, and by puncturing the bladder, death took place three days after from rupture of both Fallopian tubes. In one case related by Sir B. Brodie, death took place by passage of menstrual fluid through the tubes into the peritoneal cavity. Indeed, it is curious enough that in most of these cases of death from rupture, it is not the *uterus* which ruptures but *the tubes*. And this circumstance it is which leads me to point to an indication of practice which this case illustrates. Looking to the peritoneum and the thick uterine parietes on the one hand, and the thin dilated Fallopian parietes on the other, I think the thin dilated tumour Miss Garrett and I first felt per rectum, was not

the uterus, but the dilated tube. Its contents were certainly more fluid than those in utero. Had I made first a perforation per rectum, as was my original intention, rupture of this tube had been prevented, and the vagina could have been as safely made at a later period. I saw a case of my friend Dr. Greenhalgh's a few days ago at St. Bartholomew's, a twin case to this, as exactly like it as could be, in which this plan was adopted with perfect success, and Dr. Greenhalgh informs me it is the fourth which in his hands has under this treatment proved successful. My colleague Mr. Wells had seen, however, a case in which death had followed a rectal puncture, whereas, I think he said in four others (one a complete case of absence of vagina), had recovered well where puncture made per vagina was recently made. Much will of course depend upon the length of time for which the sound is kept in the rectal opening. Another practical point depends upon the iodine injection used. I have for some time back always injected a watery solution of iodine even in pelvic cellular abscesses. The French are satisfied with injecting warm water. The antiseptic properties of iodine or carbolic acid are, I think, inducements to prefer such agents to water. In my case the fluid was so thick, that a dilution with some liquid was essential. There remains yet the caution of avoiding all pressure over the abdomen in such cases. But this point has been so recently discussed in this Society, that I need not again refer to it.

Dr. Playfair related the particulars of an interesting case of absence of vagina that had come under his notice. The patient was a healthy and well-developed girl, twenty-three years of age, with all the symptoms of puberty well marked. She had a regular monthly nisus, but had never menstruated. On examination there was found to be no vagina. On examination per rectum, combined with examination by his hand on abdomen, no trace of a distended uterus could be felt; he (Dr. Playfair) therefore concluded that the uterus was congenitally absent, although, judging from the menstrual nisus, he thought that the ovaries must be present; he thought, therefore, that no operation was

necessary. A different view of the case was taken in consultation, and an operation was performed. After forming an artificial vagina between the bladder and rectum, no trace of a uterus could be found. The patient made a good recovery, but has found it necessary to wear a porcelain plug ever since (now more than a year) to keep the vagina distended. If this is removed for a single day, the vagina contracts at once, and she has had it twice redilated with sponge lints. This case raises the question as to whether, even when a vagina is artificially formed, it will remain open of itself.

Mr. Spencer Wells thought Dr. Routh's practice had been the best which he could have adopted. Supposing the distended state of the Fallopian tube discovered after death had been accurately recognised during life, and the sac had been punctured through the rectum, the distended uterine cavity would not have been emptied, and the cavity of the Fallopian tube would have been left open into the peritoneal cavity as soon as the canula was withdrawn. Puncture of a distended Fallopian tube, or a distended uterus through the rectum could only afford temporary relief, and it exposed the patient to the danger of fæcal gas entering the cavity as the fluid escaped; but opening the vagina gave the same temporary relief with less risk, and became a permanent gain to the patient. Further observation is required to teach us whether, in cases of retained menstrual fluid, it is better simply to remove the obstruction and leave the fluid to escape gradually, or to press it all away and wash out the cavity by iodine injections. In either case, dangerous symptoms are apt to follow—elevation of temperature, rapid pulse and respiration, scanty or albuminous urine, sickness, and pain. But he (Mr. Wells) had seen several cases where no ill effect whatever had followed the opening; and he had not yet learned why in some cases the operation simply afforded relief, and in others led to imminent peril, or death.

Dr. Wynn Williams remarked that it appeared to him, from the history of the case, that two operations were required—one to empty the dilated Fallopian tube, the other the uterus. If it were a fact, as stated by Dr. Routh, that the different parts in the pelvis, and their relations to each other, can be distinctly made out by inserting the hand into the rectum, he could see no objection to first puncturing the dilated Fallopian tube, and then proceeding with the second operation. Had this plan been adopted as proposed, he did not think that the accident that did occur could have occurred.

Dr. Rogers said that he had very carefully examined Dr. Routh's patient, and he felt confident that the globular mass that the finger touched on being passed into the rectum was uterus, and not distended Fallopian tube, as Dr. Routh now imagined

it was felt as but one body by rectum and urethra, which was so dilated as to admit the finger and permit of examination through it. There were a few lines of tissue between these through which Dr. Routh so carefully and successfully made the opening into the uterus; this was kept dilated, and, had the patient recovered, she would have had an excellent vagina. Whilst Dr. Routh operated with his finger in the rectum, Dr. Rogers held up the urethra with a sound out of danger; as the retained menstrual secretion flowed out, the enlarged uterus gradually contracted, and at the autopsy, as now, it appeared of natural size, shape, and thickness of its walls. The dilated Fallopian tubes were far back, and the finger must have been pushed far up the rectum to have touched them. Dr. Rogers could not coincide with the suggestion now advanced by Dr. Routh, that it would have been better in this and similar cases to puncture through rectum and let out the contents whether of uterus or Fallopian tubes, and then form a vagina subsequently. The Society could well imagine that a grave danger would be incurred by puncturing a Fallopian tube filled with catamenial secretion, unless it had become united by plastic lymph to the wall of the rectum. Did not this case die from peritonitis produced by this secretion getting into the peritoneum when the Fallopian tube gave way? Dr. Rogers would prefer the plan of procedure carried out by Dr. Routh in this case, and so ably advocated by his colleague, Mr. Spencer Wells.

Dr. Phillips called attention to the contracted state of the uterus in Dr. Routh's case, and to the apparent development which its tissue had undergone. It had been stated that in such cases the uterus became simply dilated, and did not contract on the withdrawal of the fluid. He inclined to think, however, that the cause of the dangerous symptoms so frequently following operative interference was the escape of some of the retained menses along the Fallopian tubes into the peritoneal cavity, caused by the uterine contractions excited by the operation. This appeared to be the explanation in the only fatal case which he had seen. The Fallopian tubes were *generally* distended in long standing cases of menstrual retention.

A CONTRIBUTION TO OUR KNOWLEDGE OF PUERPERAL DISEASES; BEING A SHORT REPORT OF EIGHTY-NINE CASES, WITH REMARKS.

By J. Braxton Hicks, M.D. Lond., F.R.S., F.R.C.P.,
PHYSICIAN-ACCOUCHEUR AND LECTURER ON MIDWIFERY AT GUY'S HOSPITAL; PHYSICIAN TO THE ROYAL MATERNITY CHARITY; EXAMINER IN MIDWIFERY AT THE UNIVERSITY OF LONDON, ETC.

In offering this group of eighty-nine cases to the notice of this Society, as a slight contribution to our knowledge of the puerperal diseases, I hope I shall not be thought to occupy the time of the Fellows without adequate advantage, by presenting what might be considered by some as imperfect and meagre reports; especially because the treatment in these cases has not been given; and again, because to none of them is appended the post-mortem appearances.

To the first objection, namely, that of meagreness, it is answered that probably enough detail will be found to bring out some points of interest; and that it must be acknowledged that if too many be brought forward at one time, particularly on such a popular and important subject as treatment, attention would be drawn away from those to which it is desired to attract observation.

With regard also to minute daily reports of symptoms, these are purposely omitted; because it is considered that in the reports of nearly every case, sufficient symptoms will be found to enable those conversant with these classes of cases to recognise the pathological phenomena.

Again, respecting the absence of reports of the post-mortem appearances, it must be pleaded that however desirable it may be to be able to add them, yet the difficulty of obtaining them after delivery in private practice is almost insuperable. Still, I think it will be noticed that generally the symptoms during life are sufficiently marked to enable those who have seen post-mortem examinations in other cases, or read accounts of those made by

others, to recognise the changes which have taken place in these.

The cases here reported in brief, have occurred to me in consultation among different classes of society, and consequently they varied much in their surroundings. This will probably be of advantage, because a very considerable number of the reports on puerperal fever have been collated from cases occurring in hospitals, and therefore more likely to have been derived from the same untoward influence, at least, during each epidemic; whereas, in the following cases, the circumstances under which they have occurred varied nearly as much as they could possibly in home practice. It is not asserted that the report comprises the whole of the cases of puerperal disease I have seen, nor all the deaths; but all those of which I have a clear history, so far as it was possible the inquiries of the gentlemen in attendance and myself could elucidate them. They have not been selected to illustrate this or that theory; they are taken indiscriminately over a series of years, and those which are omitted would be found to contain a similar proportion of varieties as those here given.

The names of the medical men with whom I saw them are also omitted for obvious reasons; but I take this opportunity of thanking those who have assisted me (and they are many) for their courtesy in ascertaining difficult, and sometimes disagreeable, facts.

The only cases which have been purposely omitted, are those in which serious symptoms occurred after instrumental or manual operations, because I am desirous of presenting uncomplicated cases, so that we may judge more clearly of the phenomena which followed. But, indeed, serious symptoms after operations (excepting placenta prævia) are really uncommon, unless associated with erysipelas, scarlet fever, or other external influences. These, however, are omitted with the exception of one or two of the simplest cases of forceps application, where the uterus was simply inactive, as it not unfrequently is where some depressing influence

has attacked the patient before labour. It is scarcely necessary to add, that while these cases are comparable amongst themselves as to the relative frequency of the various classes into which they are divided, yet it is obvious that they must not be taken as an example of the relative frequency of puerperal fever or puerperal diseases generally, nor of the deaths resulting; because, coming under my notice as they did, they necessarily were of the severest kinds.

It would be highly desirable if reports could be obtained of not only the severer forms, but of all the diseases which occur in private practice after delivery, and a full account of the circumstances surrounding each patient.

In the following report I have taken *cause* as the basis of classification, instead of the older one which gave the *type* as the basis; and it is hoped that viewed in this light an advantage, by no means inconsiderable, will be gained. We shall see at a glance the great share some causes have had in producing aberrations from normal recovery after labour.

Of course I am aware of the objection which may be made as to employing *cause* as a mode of classifying, when the causes themselves are still questioned by some; and also when it is so very difficult in some cases to obtain a complete history of all the influences to which a lying-in woman might have been exposed; and still further, when amidst so many adverse concurrences, the difficulty is great of giving to each its proper value. Yet notwithstanding this, I think it will appear that the plan adopted will be very instructive.

I have divided the classes into two groups.

The *first* distinguished according to the certain or probable cause.

The *second* containing those, the cause of which could not be discovered other than the ordinary kinds which attend the puerperal woman; but it must not be assumed that even in this group the causes of the first were necessarily and surely absent, it is simply stated that no history

of such could be made out. But the subject will be again alluded to when the group is considered.

Under this arrangement, therefore, the cases in the following report may be classified as follows:

GROUP 1.—*Having an ascertained or probable cause.*

Class 1. Scarlet fever			
A. With the usual rash	20	37	68
B. Without rash—			
1. Had been distinctly exposed to the fever	15		
2. Had been very probably exposed	2		
Class 2. Erysipelas	6		
Class 3. Diphtheria	7		
Class 4. Typhus or typhoid fever	2		
Class 5. Decomposition of uterine contents	9		
Class 6. Emanations from sloughy wound	1		
Class 7. From puerperal fever	1		
Class 8. From mania?	4		
Class 9. Pyæmia from sore nipples?	1		

GROUP 2.—*Cause uncertain*—Total 21

A. Symptoms appearing before or during labour	4	21
B. Symptoms appearing about 3rd to 5th day	17	
Total number of cases		89

Thus it appears that scarlet fever, as a cause of serious or fatal trouble, stands at the head of the list.

If we take away those in which the rash was not distinctly present even then we find its number exceeds that of any other ascertained cause. But I have included these cases under the head of scarlet fever, because the patients had, somehow or another, been intimately in association with that disease: or the symptoms they, or those about them had, were exceedingly similar to the kind of symptoms which persons

have when exposed to the disease, but do not have it in its typical state; and upon this subject I am anxious to make the following remarks.

Of the cases where distinct scarlet fever rash was present, I presume no great difficulty will be experienced in allotting the case to its cause. But where the rash is indistinct or not characteristic, there may be hesitation, because in some cases of toxæmia, we have a rash simulating that of scarlatina, which rash is generally considered as having a different origin from scarlet fever, although an animal poison; but which, notwithstanding, for aught we at present know, may be indeed indebted to that disease for its source. However this may be, when the rash is out in its full extent, and in many of these cases it was very strongly pronounced, it will I think be fair to consider that the case is one of scarlet fever.

But where the rash is indistinct or not characteristic, there may be some hesitation at first, but if we observe cases which have been unquestionably communicated, where the rash is indistinct, we shall find less difficulty in recognising the rash as that of scarlet fever. Possibly, four of the cases included in Class 1 A may be of doubtful origin, but the rash certainly was not less marked than in some of the clearly ascertained cases. This exanthem, especially of late, is so prevalent, and so insidious in its attacks, that it is impossible to say that there has been no chance of contagion. The sifting necessary for these reports has shown me how frequently the parturient woman is exposed to its influence when least expected. A houseful of children, a nurse from the poorer classes; the medical attendant necessarily mixed up with the exanthemata, more or less, are threefold causes, pregnant with risks, to which even more might be readily added. To distinguish this indistinct rash from that which appears in pyæmia of hospitals, &c., is difficult; but it may be asked, Are they really different? may not many of such cases take their primary start from scarlet fever, introduced unsuspectedly from without? This is a subject difficult to clear up: but I expect a very close and constant investigation as to the surrounding of each

patient before admission would help much to put us in possession of the truth.

There is a point worthy here of notice which occurred both in those cases where the rash was distinct and otherwise, namely, the absence of marked sore throat, even in those where the rash was of extreme intensity; very seldom was the sore throat complained of at all, and the swelling and tenderness of the cervical glands were scarcely ever noticeable in the cases of this report.

However, there were a number of patients who had been certainly exposed to the influence of the poison of scarlet fever, in whom, however, no rash mark sufficient to be recognised appeared, but who had other symptoms generally understood as that of blood-poisoning and its sequelæ. In order to understand the relation of these various cases to one another and their supposed cause, it is important to bear fully in mind the variations of scarlatina itself in the non-puerperal patient.

For, I presume, it will be admitted that scarlet fever can affect the human frame without producing any rash at all, or to so slight a degree as not to be noticed; and, indeed, the extreme variation in intensity of the rash itself, and its slight appearance in the most rapidly fatal cases, is a sufficient evidence that we cannot regard it as an essential (though very common) feature of the complaint.

Neither, again, can we consider the absence of the sore throat as an absolute proof of its absence, because, doubtless, cases do occur where sore throat *is* absent. This circumstance, therefore, coupled with the extreme variability of the rash when it is present, cannot permit us to regard either sore throat or the skin rash as essential parts of scarlet fever.

If this be the case, it is not difficult to understand, or at least we may be prepared to receive the statement, that there are some states of the human body which do not permit the ordinary forms of expression of this disease, although the influence may extend even to a fatal result; and, indeed, in some instances the tendency to a fatal result may even be increased by such a disposition of the system.

It is a well-recognised fact that cases occur in the non-puerperal state where the scarlet fever poison, as indeed poisons of a like nature do, so acts on the system that the ordinary manifestations of the disease are impossible for want of time, the patient dying during the period of incubation.

The consideration of these and similar facts leads me to take this opportunity of dwelling on the importance of recognising the variability of diseases. There is a natural tendency, when engaged in defining disease, to notice and adhere to the more distinct and typical forms, while we ignore all the less marked or anomalous kinds. But there are many diseases, particularly the exanthemata, which are not rigidly defined. Every practitioner has seen many cases, which either from possessing symptoms common to others, or failing in some of those proper to them, cannot be strictly placed under any absolutely limited head; these we dismiss from our mind as "anomalous" cases; and then forget them. But we remember those well-defined, and we gradually tend to believe rigidly in "fixity of symptoms." Essential service would be done to our knowledge if these so-called "anomalous," "abortive," or "hybrid" conditions in the variation of the progress of disease, or of its mode of manifestation, were collected: ample opportunities are afforded during the progress of a severe epidemic.

Upon this point I may quote the lecture of Mr. J. Hutchinson in 'Medical Times and Gazette.'[1]

"Now, although we have defined an exanthem to be 'the rash attending a specific fever,' yet it is clearly possible to have a specific fever of the same class without the symptom of rash.

"The latter is only one of the phenomena which are the usual, but by no means essential, parts of the general disturbance which attends the blood change induced by a specific animal poison. Thus it is well known that children may have smallpox, measles, and the like, without the rash coming out; and in those in which the rash does appear, it varies in different cases within very wide limits.

[1] Lecture on "Erythema Nodosum and the Doctrine of Abortive Exanthems," by Jonathan Hutchinson. 'Med. Times and Gaz.,' April 3, 1869.

"In hooping-cough we have an example of a contagious malady which occurs but once in a life, and which resembles the exanthems in nearly everything, excepting that a rash is not amongst its symptoms. In chicken-pox, we have, in the opposite direction, an instance of a disease in which the general disturbance is so slight that, if the rash did not appear, we should not know the patient was ill.

"Probably many children catch chicken-pox (it is very infectious), and, having little or no rash, go through it without its being known. My own belief is, that what we call 'abortive exanthems,' that is, cases in which the disease is so mild that it produces no eruption, and is never recognised as such, are very common."

It is not denied that the definition of disease is absolutely essential; but we shall miss a large amount of knowledge if we forget the variability, possibly of the cause, and certainly of the external expression of a disease in what we call symptoms.

These remarks I have been induced to put forward here, because it appears to me, as also to others, conclusive that there are states of the system engendered in some way or other, in the puerperal woman by poisons, which in other conditions or states of the system manifest their presence in a different mode.

This, it appears, is true, not only of the exanthems under consideration, but of others, particularly of erysipelas.

From the evidence these cases bring, we certainly must admit (see cases Class 1 B.) that while a puerperal toxæmia (or puerperal fever) existed in the mother, her children were affected with scarlet fever, either before or immediately after, the mother showing no symptoms which could be recognised as those of scarlet fever. But whether a woman having such symptoms derived from scarlet fever, or from erysipelas, can give to a non-puerperal person the original disease, the cases here brought forward do not give any conclusive evidence; all those instances where persons in the house were subsequently affected (cases, Group I, Class 1 B.), may have occurred from a common origin. One case where erysipelas succeeded

in the nurse and infant at least a week after the occurrence of symptoms of toxæmia in the mother, may appear to give support to such a supposition, but it may be explained by the existence of a common origin (Class 2). The same remarks apply to the case (Group I, Class 1 B, 2) where the husband and nurse were severely attacked by inflammatory sore throat a day or two after the puerperal woman was attacked by fatal puerperal fever.

I am fully aware that it is possible in each individual case to assert the probability of an independent origin; but when we take the mass and examine the symptoms, both of those with well-marked scarlet fever and of those who had been exposed to its poison, and compare also each with the other, and, still further, compare them with the symptoms of those having other origins, the evidence, it appears to me, compels one to the conclusion that certain diseases in entering the puerperal woman may act upon her system in such a manner as to give evidence of its presence in a mode widely different from that which it presents ordinarily in the non-puerperal state. And why not? What do we so much know of the poison of scarlatina and erysipelas that we can say, *à priori*, it shall only assume one mode of exhibiting itself?

No doubt some difficulty has been caused in receiving the above theory, by the fact that it is not always that it appears other than by the ordinary mode; on the contrary, for it will be noticed that in nineteen out of thirty-six where it was probable scarlet fever was present, that the rash presented itself. But it was noticeable that the sore throat was a very slight affair in almost every one, so much so as to be unnoticed by the patient, although the condition in other respects was most serious. Probably in all there was a reddened throat, but very few patients complained of it; and I do not remember in any one to have seen the cervical glands enlarged to any extent. Difficulty of swallowing was very rare, in none sufficient to cause distress. As far as my experience goes, it may be stated that the more the general symptoms were those of ordinary scarlet fever the less there were symptoms of so-called puerperal fever, while the less

they were of ordinary type the more the puerperal fever appeared and the more the symptoms of pyæmia, &c., were manifested.

Now, the connection existing between the cases with rash and those where there was none will appear more clear if we examine the symptoms which they have in common, putting for the moment the rash out of consideration; and here we shall instantly observe a great similarity of phenomena or of groups of symptoms. Diarrhœa, vomiting, nervous prostration, very rapid pulse, delirium, are constantly present in both, and also very commonly metritis, cellulitis, phlebitis, with their results. Let us look at Group I, Class 1 A, Case 5. Here was an undoubted case of scarlet fever. She had the easiest labour possible, being only a few hours altogether in it, being delivered before the arrival of the medical man; it was described as being a remarkably easy affair; and the placenta also came away naturally; yet after it she had every symptom which belongs to the so-called puerperal fever, if we add to it the rash. Local inflammations were present after a short time, those which until very lately were considered as an essential part of the disease. But this case seems to afford a very clear explanation of their occurrence when we consider all the circumstances. After the most simple labour there is always a certain amount of bruisings and ecchymosis about the lower portion of the uterus. These, in an ordinary state of health, are soon recovered from, but when the processes of life are disturbed by the poison of scarlet fever, erysipelas, &c., the natural tendency to recover is not only checked, but deterioration of the material effused takes place; inflammation of the uterus and of the adjacent parts is set up, to end in the well-known complications attending the puerperal state, such as phlebitis, pyæmia, embolism, &c. The same result will be obtained by any influence which will depress the vital powers, such as mental emotion, bodily privations, intemperance, exposure to impure atmosphere, or any animal poison whereby the reparative powers are interfered with, in the same manner as a

bruised part will suppurate in an unhealthy person while it will rapidly recover in a healthy one.

Thus the existence of these secondary conditions cannot, per se, be taken as evidence in favour of the presence of a single particular cause. They are undoubtedly conditions liable to occur in the non-puerperal states after operations, especially if the patient be exposed to deteriorating influences, although the liability is much increased by the changes which occur in the general system during pregnancy and in the puerperal state.

The presence of decomposing secretions in the uterus, besides their local effect, may cause the same results by producing a toxæmia, then uncorrupted repair of the bruised tissues, thus leading on to the development of metritis, cellulitis, peritonitis, pyæmia, &c. So that it is not difficult to see that in such a case the patient may be suffering not only from the original blood poisoning from the absorption of a poison formed within the cavities of the uterus, and from the destructive influence of local disorders of a grave character, but also from a secondary pyæmia the result of the local troubles. This case differs only from the one produced by septic fever in the character of the original poison.

These remarks will, I believe, apply in even a more forcible degree to cases of puerperal fever ingendered by erysipelas; but this I gather not so much from the cases here recorded of that kind, because they are too few, but from the observations of others, although these in this report tend to confirm them.

In this (river) are to be found cases like those described by many, especially in severe epidemics in hospitals, where the progress of a fatal termination has been so rapid as to give no time for any secondary symptoms local or general to appear, death taking place within one or two days from the appearance of fever, the patient dying during the period of incubation.

There is one curious point about these cases of scarlet fever in the lying-in woman; it is that the symptoms commence in almost every case about the third day, seldom beyond the

fifth. Why a woman should contract this disease more especially about the time of labour it is very difficult to say. Constantly one sees cases where the pregnant woman has been exposed continuously for months to scarlet fever without being affected, but as soon as she falls in labour the symptoms appear. If she were prematurely delivered this would not be surprising, because it would be probable that the setting-in of the disease had shortened pregnancy; but in very few of the cases here recorded this was the case, and in none more than two weeks before the expected time.

To explain the fact one must assume either that the pregnant woman possesses a wonderful power of resistance, or that the disease is communicated to her during the labour by the medium of the vagina. In any case the period of incubation is much reduced, for generally symptoms arise on the third day and the rash on the following. If the disease is conveyed per vaginam it is not improbable that its action may be rendered more violent and rapid than when received through the medium of the lungs.

Indeed the transmission of a disease by inoculation undoubtedly alters its character, but to what extent it may operate under the conditions of labour we have no evidence of sufficient importance to enable us to judge so far as I am aware of. It may, however, be sufficient to explain the variation observed in the puerperal woman.

Regarding this point Mr. Paget, in his instructive address in surgery, reported in the 'British Association Journal' for 1862, makes the following remarks:—"It seems to me to be very important that we should be quite clear as to the constitutional origin of all these affections, *i. e.* we may believe as to their being essentially due to the presence of specific morbid materials in the blood, whether bred in it or introduced from without. For, if we hold this of them, then we may study them and treat them by the light of those which are the very types of those blood diseases, namely, the eruptive and inoculable fevers. It is true that erysipelas and phlebitis, for example, are most apt to appear, like local disease, at the seat of injury, and there to be most intense. But a true

eruptive fever will do the same. For instance, I cut a boy for stone; three days after he became very ill and seemed in danger of his life; but soon a viscid red eruption appeared at and about the wound. This was measles, earliest and most intense at the seat of injury, just as erysipelas might have been. Hence, it extended and ran its ordinary course and did no harm. I have seen similar events in a case of injured and inflamed knee with scarlet fever; and Dr. William Budd has recorded one of smallpox which appeared most intensely over a bruise on the nates. The local determination of erysipelas and of other allied diseases, after operations, is accordingly no proof at all of their local origin or local nature. The same local manifestations happen in the truest eruptive fevers." He then points out the difference of the time in which inflammation sets in when of a local or traumatic nature, and when of an erysipelatous kind,—the former setting in early and subsiding generally, whereas the latter occurs at a later period.

These facts, however, although they show that the eruptive diseases do appear at the seat of injury first, even where no abrasion has occurred, still they do not show that they cannot also be introduced into the system by means of inoculation through a wound. For in ordinary vaccination, although the local inflammation of the operation subsides, a fact well shown in those cases where the incubation period is abnormally protracted, yet the introduction of the poison is clearly local. Indeed, Dr. Aitkin, in his work on medicine mentions the fact that scarlatina has been propagated by inoculation.

I would add the following instances showing the difficulty of determining whether a rash appearing after an operation is of pyæmic or scarlatina origin or not.

Case 1.—The first was narrated to me by Mr. Jonathan Hutchinson. A boy was cut for stone: a few days after the operation he was covered with a scarlatina rash. It was at the time considered probably owing to the absorption of some poisonous matter. But closer inquiry showed that the patient who had occupied the same bed just before, had had scarlet fever.

CASE 2.—A gentleman had a cyst removed from the neck. On the third day he was feverish, with furred tongue, the wound looking unhealthy. On the fourth day a rash like scarlet fever was all over the body, with only slight sore throat. On the fifth day the rash was well out; tongue red and clean. After this the symptoms subsided, so that at the end of ninth day all the symptoms had subsided. On the seventeenth day after the eruption first appeared on the husband, his wife was attacked with well-marked symptoms of scarlet fever.

CASE 3 is narrated by Mr. Bryant in his Part VII of 'Clinical Surgery.' A lady had been subjected to ovariotomy; on the fourth day scarlet fever appeared all over. It went its course without detriment to the operation. The skin desquamated subsequently.

There is another circumstance regarding the rash when it occurs that is worthy of notice; namely, its appearance simultaneously over the body, not, perhaps, always, but certainly to a greater extent than in ordinary scarlet fever. Indeed, it might be readily passed over unless the trunk were examined. The same remark will apply to the throat, which is often so slightly affected as to be unnoticed by the patient herself.

The appearance of scarlet fever about the third day coincides with the appearance of so called "puerperal fever," and, so far, this fact does not enable us to draw any distinction between them.

In those cases where the patient had been exposed to scarlet fever, but who showed no rash, the symptoms occurred in like manner about the third day. These I have classified along with those who had the rash, because, although it may be open to disputation whether they depended upon scarlet fever or some other influence, yet, when we observe the large proportion they bear to the others, one has difficulty in ascribing the occurrence of serious symptoms to a mere coincidence. For it must further be remembered that these cases are not selected to illustrate any theory, but are taken as they occurred in consultation practice.

Of course, as before mentioned, they are not any proof of the frequency of scarlet fever among lying-in women, only an

illustration of the frequency of scarlet fever in the more serious cases, as comparable with other severe puerperal diseases.

The account of the temperature of these cases is, I am sorry to say, very imperfectly noted. But in those of which I have record it has been about 105–6° Fahr. But no continuous observations have been carried out in this report sufficient to make any use of. In one case, however, who had been affected by scarlet-fever poison and who had pyæmia, &c., for some time the temperature was below the standard, as also the pulse for a week was below 70, although the other symptoms would have led us to expect a higher state of both.

I have not been able to gain sufficient information to enable us to judge as to whether the rash has occurred in those who have never had scarlatina before, and in those without it who had previously had it, but I am inclined to think that some such law regulates these cases.

A review of the remarks and of the cases reported leads us to the following conclusions :

1. That of those who are severely afflicted after delivery in private practice, a large number owe their troubles to the poison of scarlet fever.

2. That about half of this number have most of the usual symptoms of ordinary scarlet fever, namely, the rash and sore throat, &c.

3. That with this ordinary appearance secondary troubles are frequent, both local and general, *e. g.*, metritis, cellulitis, peritonitis, pyæmia, &c.

4. That the sore throat is slight in all cases and the rash appears more simultaneously over the body than in ordinary cases of scarlet fever.

5. That the influence of scarlet fever is shown without necessarily the rash or sore throat, the patient having symptoms of blood poisoning in a greater or less degree, producing, if the patient survive a sufficient time, secondary, local, and general lesions, such as are to be observed when the ordinary symptoms are present.

6. That the disease almost always commences from the third to fifth day after delivery.

7. That though the woman may be exposed continuously for months before labour, still the disease does not generally manifest itself till the third to fifth day after.

GROUP I, Class 2.—*Erysipelas.*

There are but few cases of this disease in these reports.

This contrasts strongly with the records of hospitals, where probably it is the most frequent cause of puerperal disturbance. Indeed, so prevalent has it been in some instances, that some writers have come to the conclusion that puerperal fever is but erysipelas of the peritoneum. This may be the case in those cases where the parturient passages have become attacked by the complaint; but where other portions of the surface are affected it doubtless acts through the general system, without any primary local manifestations or extension from without to within.

That the poison producing erysipelas can act upon the puerperal woman, even to a fatal result, without any external skin affection is apparently abundantly proved by the records of lying-in hospitals; and certainly these reports, as far as they go, do not disprove this conclusion. On the contrary two show considerable evidence in its favour.

There is no doubt but that scarlet fever and erysipelas have much affinity; indeed, some have suspected them to be but a slight modification of the same poison, apparently interchangeable.

How far this may be the case these cases bring no evidence. That they possess symptoms in common in the puerperal woman forms no further evidence of their unity than can be said of any other of the diseases which are in this report shown as the cause of the post-partum disturbance.

One of these cases (Group I, Class 2, Case 4) is very remarkable in showing that symptoms totally dissimilar from erysipelas in the puerperal patient was succeeded in both the nurse

and infant by erysipelas. Of course it is quite open to dispute whether there were any real connection between the two; still the frequent association of erysipelas with "puerperal fever" makes it highly probable that there was. Again, we find in the Case 5 an association of another kind, for almost simultaneously with the occurrence of puerperal fever in the mother her daughter has erysipelas of the face. Here the symptoms were precisely similar to those which are found to follow the influence of erysipelas in wards. In the former mentioned case, there were some peculiar symptoms worth observing, but upon which it is not intended to dwell now.

It is to be remarked how small an influence erysipelas exerts on the puerperal woman in private practice compared with that of scarlet fever. But this is not to be wondered at when we consider the relative frequency of these two complaints in the same sphere of practice, and also particularly when we notice that scarlet fever is so common among children, whereby it is brought into close relationship with pregnant women, while erysipelas attacks adults more frequently, who would not require so much the attention of women in that condition.

Class 3.—*Diphtheria.*

I have seen seven cases of lying-in women attacked by this complaint in simple labour. It may produce only the symptoms peculiar to itself or it may be accompanied by secondary local and general lesions, like those we observed in scarlet fever. In those reported here only three have died, so that probably, although the symptoms are very alarming, the chances against recovery are not so small as in scarlet fever.

I have seen two others in which diphtheria attacked the lying-in woman, but these were complicated, one with severe employment of forceps before I saw her. She had suppuration of the cellular tissue about the shoulder and died suddenly after partial recovery. The other had desquamative nephritis during pregnancy, and aborted at the fifth month. It was followed by low type peritonitis, suppuration in pelvis;

but apparently she succumbed as much to the uræmia as to the secondary troubles.

I have a record of one case of so-called puerperal fever occurring in the puerperal woman, exposed to diphtheria, in whom the symptoms of the latter did not present themselves (Group I, Class 3, Case 6). Whether this case took its rise from diphtheria is an open question.

Class 4.—*Typhus or typhoid.*

The two cases which have here been entered under this head had certainly been exposed to the influence of these poisons, but so small a number helps us to no conclusion on the point as to whether symptoms of puerperal fever may arise from these diseases. They can only be considered as a slight addition of facts.

The only other case of which I have a distinct remembrance was a woman of our maternity who was brought into Guy's Hospital, with typhoid fever immediately after her confinement, but she had simply the ordinary symptoms, and recovered without any local or general lesions.

Smallpox.

Before leaving the exanthemata I may mention that I have no notes of the occurrence of smallpox with lying-in, although I have seen three of which I have a clear remembrance of principal facts. In all the disease was "modified," the symptoms were those of that form, and the patients recovered readily, without any local or general lesion.

Class 5.—*Decomposition of contents of uterus.*

There are nine cases here reported, in which serious troubles have arisen connected with offensive state of the lochia and vaginal discharges.

Last year I read at the Leeds Meeting of the British Association[1] a paper on the influence the putrid contents had

[1] See 'Journ. Brit. Med. Assoc.,' Nov. 17, 1869.

on the patient; and endeavoured to point out the value and necessity of employing the intra-uterine douche under such circumstances. This subject also has received a passing remark in this Society.

The effect of this state of the discharges depends a good deal on the position of its source. When, for instance, a clot is only in the vagina the influence is not so formidable as when it is intra-uterine; but in all cases it is a frequent source of mischief, particularly if there be abrasions in any part of the parturient passage. It is not always easy to name the source of the effluvia, for occasionally, and that particularly in low states of the vital forces, the ordinary secretions decompose, and if this low state of the powers depend on a cause which may itself produce symptoms of blood-poisoning, there may be many causes coexisting in the same patient.

In any case it either inaugurates the mischief or adds much to the intensity of another cause. For, doubtless, it can cause locally metritis, cellulitis, peritonitis of the worst type, which alone may cause general infection of the system, and thus these dangers are added to those of the effects of the primary infection of the system from the same source; so that the process of recovery locally is interfered with and the tertiary danger of infection of the system from the local suppuration made more imminent.

Indeed, I think we may believe that erysipelas, diphtheria, the poison from the dead, &c., act in somewhat similar way, so that in cases of this kind we have a complication of circumstances, viz. constitutional deteriorations and local lesions reacting in a mutually sinister direction.

Many of the cases of this class are omitted in these reports, for the reason stated at the beginning, namely, that they were associated with complications, which might have made the results less expressive; still, in the greater part of them, it would have been clearly apparent that the symptoms arose rather from the absorption of unhealthy matter, because they ceased almost immediately upon washing out the interior of the uterus.

Class 6.—*Puerperal fever from sloughing wound.*

I have one case of very rapid puerperal fever. The patient lived in the country, and was not exposed to any mental or other depression. The medical man, however, informed me that he had been dressing a sloughing wound twice a day, and that he had been doing so just before his attending this patient. Here, again, disputation may arise whether this were the true cause. However, I enter it here, and believe myself that it was the most likely one. When we consider the effect of this influence on the wounds of patients in a surgical ward, it will not require much argument to point out the similarity of the conditions.

Class 7.—*Puerperal fever.*

Only one case has fallen under my own notice which could be made out as conveyed by the medical attendant. The history of the case is given with it. There may have been others, but I could not hear of any such history. It is satisfactory to find that this once formidable cause of diffusion of puerperal fever by communication has been so reduced.

This remark applies rather to the form of puerperal fever which has hitherto been considered simple and typical; but I am inclined to think that some included in these reports were conveyed by the medical men attending exanthems, particularly scarlet fever in the puerperal woman.

Class 8.—*Acute puerperal mania.*

In regard to acute puerperal mania I have great difficulty in classifying this condition as a cause. I have unfortunately lost notes of many of these cases, but certainly the larger number were afflicted with local symptoms first, and about eight out of ten had offensive lochia; so that some of the cases of mania will be found under other headings, particularly under that of "Offensive Lochia." It is difficult in many of these cases to say how much of the intensity of the symptoms are owing to the primary cause, and how much to the conse-

quent mental excitement. No doubt the danger is enhanced by the latter, especially when insomnia has been protracted. But I think we ought to look upon acute puerperal mania in *almost all* cases as merely a maniacal addition to ordinary puerperal fever, and not as a disease *per se*. Some cases, doubtless, there are where the mental affection seems to be the only prominent symptom, but even here some doubts may exist when we find that albumen is found in the urine of most cases of acute puerperal mania. In the majority we certainly find a history of great natural mental excitability, and emotional susceptibility, or of mental aberration in the family. So that puerperal fever however produced, in a naturally excitable brain, coupled as in primipara, with all the excitement and disagreeables of a first labour, is, I have reason to believe, the very frequent explanation of the mental symptoms.

It might be said that the offensive lochia, so frequent in these cases, is the result of the deterioration of the vital powers through the mental disturbance, but this cannot hold good when we observe that these and the local symptoms precede by some days the head symptoms. No doubt a violent mental shock, about the time of labour, may so depress the system as to cause all the natural healthy actions to become perverted, and thus, like a poison of an exanthem, to interfere with the healing processes in the uterus, so as to cause exudations and their sequelæ, or, as in some of these cases, to mingle its depressing effects with those of an exanthem, and thus to multiply the danger.

In some cases of puerperal mania *flooding* occurred previously, and the exhaustion so produced no doubt tended to the cerebral excitement; but its true value is difficult to assess, for doubtless also flooding is indirectly a promoter of toxæmia, partly by the depression produced on the reparative powers and partly (which is by no means uncommon) by the retention of a clot within the uterus, which, decomposing, will cause offensive lochia; and as toxæmia is liable to arise from this source, and this, if it occur with an irritable brain, to set up mania, then it is difficult to say how

much exhaustion simply and how much toxæmia is to be credited with the mental symptoms.

Class 9.—There is one case I have entered here in which the cause of pyæmia seemed to have sprung up from sore nipples. There was no sign of any uterine complications, but the nipples were cracked and inflamed, and breast showed clear marks of inflammation before the setting in of the pyæmia.

GROUP II.—*Cause uncertain.*

We have now to consider the group of cases in which no particular external influence was found to account for the symptoms. Twenty cases are placed in this group. Let us see how far they can be distinguished from each other.

Firstly, there are three cases in which the pulse was rapid from the commencement of, and continued so all through the labour. Whenever this occurs one may expect that some serious condition is impending, such as pneumonia, scarlet fever, diarrhœa, &c. In all such cases the practitioner will necessarily feel much anxiety for the ultimate recovery of the patient.

In some rare cases of rapid pulse early in labour the cause is traumatic, owing to laceration of adhesions or laceration of the peritoneum, or even of the muscular fibres of the uterus, but not involving the serous layer. The crushing of tumours by the force of the uterus very possibly may cause a rise of pulse, but seldom this occurs very early in labour. Trismus uteri, occurring sometimes as it does early in labour, will give rise to quickness of pulse, but a careful investigation of the state of the uterus will readily show this state.

But, as a general rule, permanent quickness of pulse early in labour will, I think, indicate an aberration of the general system much more frequently than a local lesion; and, at any rate, these cases do not belong to that form of puerperal disease called "puerperal fever proper."

There are some light cases reported here which seemed to have originated in the simple process of labour—in other

words, traumatic. No doubt the ecchymosis so frequently seen after delivery is occasionally excessive and hæmatocele results. This will give rise to much disturbance locally. How far these cases had that origin it is impossible to say, for they recovered.

It seems not improbable that in some of the cases (14 and 15) there was an irruption of either blood, pus, or contents of a cyst into the peritoneal cavity.

There is only one case of an unmarried woman in these reports. It is true I have seen others, but have no sufficiently accurate report of them to rely upon. But in any case the number of unmarried I have seen in severe puerperal disease cannot be much more than three. One of these died under very distressing circumstances within six days of delivery, another died about the end of the third week from peritonitis. The one here reported was apparently unconnected with any external infection. There is no doubt but that the depression produced by the circumstances of illegitimate childbirth is sufficient to cause dyscrasia, and consequent tendency to abnormal changes in the parts exposed to the forces of labour; but if this holds good in patients in healthy atmospheric conditions, how much more so if the poison of an exanthem, or erysipelas, or vitiated air, should attack a patient thus already depressed? Indeed, it has been argued, and fairly so, that hospitals which take in unmarried females for delivery incur necessarily the risk of a greater death-rate than those which refuse them.

If we, again, consider the larger death-rate of primiparæ, even when married, we must still further, in comparing the relative mortality of hospitals, take into consideration what proportion of married there are to unmarried and what of primipara in the former. So, also, before we can compare safely the results of home attendance with that of hospitals we must see whether the hospital cases include primiparæ, which is more rarely the case in home attendance like the Royal Maternity Charity.

With regard to the remainder of the cases, many explanations may be given as to their cause when we take into our

consideration how many depressing influences occur to the puerperal woman which may prevent normal reparation of the parts influenced by labour.

Besides these we have doubtless in the pregnant woman a state of blood very conducive to dyscrasia; a tendency in many to accumulate effete materials which should have been thrown off; a nervous system inordinately susceptible, capable of influencing the state of the fluids by interfering with the functions of the excretory organs, and the uterus in a state more easily affected through the nervous system than at other times. These, and indeed more might be added, are sufficient possibly to account for the remaining cases, although it was difficult in each case to say to which of these causes to refer the disease.

Yet when we see in Group I how many cases have been associated with the influence of an animal poison; it will be admitted very difficult to say, considering how many persons from various localities are generally in attendance on or visiting the lying-in room, whether any of these cases might not have been exposed to some such poison although unknown to us. An instance of this kind occurred recently in a case which is not here reported, because I was unable to obtain all the facts of the case at the time. But this much I have learnt—I saw a lady in the absence of her medical attendant about twelve days after her delivery, having been suddenly attacked with obstruction of the femoral vein. She had had some feverishness for a few days, and throughout the lochia had been scanty. However, on the return of her usual attendant, two days after, I ceased attendance, but she continued ill for some time after, suffering from symptoms of cardiac embolism and venous obstruction. Associated with this gentleman in attendance on the case was another medical practitioner whose child had "gastric fever." He attended in labour a lady shortly after who suffered very severely from metritis and pelvic troubles. How far the one was the cause of the other it is, of course, uncertain, still the association is worthy of notice. It was three months after that I became aware of the latter patient's illness. So that the intimate connection

between zymotic diseases, &c., and puerperal diseases is frequently very difficult to find, unless great pains are taken in inquiry. Indeed, a considerable number of the cases would have fallen under the latter group had I been content to have looked upon the cases as "puerperal fever" and no more.

But however frequently the cause of puerperal diseases may be owing to zymotic influences, still it is easy to understand that imperfect drainage, close rooms, and bad dwellings, would be sufficient, by continued action, to produce such a state of the constitution as would tend to effusions, suppurations, pyæmia, and peritonitis.

The observations above made regarding the effects of flooding on the puerperal woman and its liability to assist in causing acute puerperal mania are applicable here. Indeed, many of the cases of puerperal fever are largely influenced by the combination of blood-loss with another or even a third cause.

Again, I have in this group no information as to whether offensive secretions remained in the uterus after delivery. I have found it not infrequently a difficult matter to ascertain from the medical attendant certain evidence on this point; indeed, I have smelt the room, and particularly the bed, markedly offensive without the medical attendant having noticed it, and even when it is remarked upon it is rather the exception than the rule to consider it of importance. But not always so; there are some medical men who are fully alive to the danger, and habitually endeavour to correct this condition, and are not content by simple vaginal ablution.

Thus, in this second group of cases, whose cause is uncertain, some certainly should not be classed as typical puerperal fever. I would exclude four, if not five, cases, leaving fifteen or sixteen to be, as far as we are aware, classed with those whose cause may be considered probably arising from some condition of the system engendered within.

There are 15 cases out of the 89 in which arthritic inflammation arose.

Comparing those cases comprised under the head of scarlet

fever with those where the cause was uncertain, we find 7 cases out of 37 against 2 out of 21.

Comparing those cases where we have the usual symptoms of scarlet fever with those of the second division, where the ordinary symptoms were absent, but exposure distinct, we find the cases about equal.

That cases of scarlet fever in the puerperal state should have this complication will not surprise us when we consider that the condition is not infrequent in the disease under ordinary circumstances. The true value of this symptom has not been, to my knowledge, fully ascertained. Although we find it present in the severer cases, yet, should the patient continue to exist, this affection passes off in many without any damage to the tissues. It is true, suppurations occur in some cases, but this is rather in the cellular tissue, some distance from joints, than from true arthritic implication.

Indeed, in all diseases the occurrence of joint affections is exceedingly interesting, and in its various associations with the puerperal condition well worthy of more elaborate study.

The proportion of this complication will be seen in the accompanying table.

Table of Arthritic Complications.

Group I.	Class 1 A.	4	out of 37 cases.		
	„ B.	3			
	„ 2.	1	„	6	„
	„ 3.	1	„	7	„
	„ 4.	1	„	2	„
	„ 5.	2	„	9	„
	„ 6.	0	„	1	„
	„ 7.	0	„	1	„
	„ 8.	0	„	4	„
	„ 9.	1	„	1	„
Group II.	„ A.	0	„	21	„
	„ B.	2			
		—		—	
		Total—15 out of 89 cases.			

In looking broadly over these reports there are certain points which appear to be worthy of attention.

1st. How few cases are there of a severe kind in private practice which have not been somehow associated with some zymotic disease or some well-known animal poison, and how few whose cause (if this is believed to be sufficient) remains a mystery.

Thus, there are, if I am correct in classifying them, 68 cases where a distinct cause can be found, as compared with 21 where the nature of the cause had not been made out. This is in private practice. Doubtless, in hospitals, during a severe epidemic, the special cause may not be so readily made out; but certainly, in some epidemics, where the symptoms were of the most rapid and dangerous type, it has been found, upon careful examination of the vagina, that erysipelas was present in nearly all, although without that examination it would have been overlooked, from the similarity of the symptoms to so-called "puerperal fever." It is more difficult to make out the cause of those epidemics which do not present the ordinary symptoms of the disease from which it seemed to spring. I have nothing in these reports which at all approaches to the rapid spread which occurs in wards of hospitals where no special arrangements have been made to prevent its diffusion, as in former times.

2. These cases seem to go a considerable way in supporting the opinion already alluded to in the foregoing remarks, and which of late have been largely recognised by the profession. As before observed, we know so little about the nature of these poisons, and have studied so little their modifications, that we are in no position to say *à priori* what should be expected. It is only by the study of large numbers of these cases that we can arrive at any safe conclusion. Still, a great deal has been done, if not to prove the origin of this disease, yet to show that the removal of the supposed cause has at once removed the disease; and the contribution I have here brought before you will, I think, tend to show the frequency of the association of puerperal diseases with the distinct risk of contagion, as well as the variety of diseases, which may be associated with parturition to the detriment of the patient.

At least we may say that it is a wonderful thing if so large a proportion could have arisen out of a simple coincidence.

3. It cannot fail to have been noticed how large a share scarlet fever has in being associated with puerperal disturbance. The last epidemic of this exanthem has shown this markedly.

4. Inasmuch as these cases here reported have occurred in simple labour, is not this fact worthy the attention of those who have insisted upon the entirely traumatic nature of puerperal fever? In the majority the labour is reported as very easy and natural; and, indeed, we should expect that, if puerperal fever were only traumatic, death would be frequent after midwifery operations, whereas serious symptoms after these, carefully done, are in my experience rare in home practice. But I believe the truth may be thus stated—that in ordinary health, and with freedom from deteriorating influences, injuries and local disturbances done by parturition, or by assistance given to it, are recovered from; but if any poison or depressing influence invade the pregnant or labouring woman, then, in addition to the direct influence of a poison, inflammation or suppuration of the parts occur, which by the local distress they cause may set up pyæmia, thrombosis, &c.

A few words in conclusion. There is one fact not mentioned in the reports, but which is worthy of notice, namely, that I have found the whole class more frequent in newly built than in older houses. It might be that the frequency of puerperal diseases in primipara may account for this, inasmuch that the newly married more usually take newly built houses. But it is also a fact that the inmates of new houses are very liable to be attacked by scarlet fever, typhoid, diphtheria, &c., and this, I believe, may be well accounted for by the fact that the drains of new houses are more liable, after a short tenancy, to be deficient. I think, as regards the married middle class about London, this latter explanation forms a more valid explanation than the fact that primiparæ are more frequently confined in new houses.

A remarkable group of cases of various aspects I have

preserved (and will be found at page 102) which occurred in a new and not large locality, where within half a mile eight lying-in women died in a year in the practice of six medical men, besides others I did not see.

Again, if puerperal diseases do really spring from the various causes enumerated above, then extension of attention towards the prevention of the association of these causes with the lying-in woman is clearly the line which we should follow; and if we can prevent these dreadful causes, then we may hope some day to see extinguished a very large proportion of puerperal diseases. Even if we can prevent scarlet fever only we shall have diminished the number by at least half, and if attention is paid to clearing the uterus of its offensive contents we shall remove a considerable number more.

In a number of the cases of scarlet fever the pregnant woman had been knowingly exposed to the influence of the poison, in many instances for some months continually. It is true that some of them were warned of the danger, but in other instances no such warning was given by the medical man. I need scarcely endeavour to point out the obligation we are under to take every possible step to the separation of the pregnant woman from the influence. In most cases it would be best to remove the pregnant woman, because the fever lurks about the house after the removal of the affected, and because the state of the house may have originated the disease. In a large number of these cases where the disease had occurred in the house previous to delivery the attacks were mild, and no anxiety on account of the children was felt, so that the mothers' lives were needlessly sacrificed. Where the sick are in danger, or dying, it may be difficult to prevent the mother running the risk of nursing her children or husband, but we cannot, I think, be too importunate in all cases of the kind under consideration to urge the need of separation.

Again, with regard to the medical attendant, although I have found some fully aware of the risk of carrying scarlet fever, erysipelas, &c., to the woman in labour, yet I have met with not a few who either have not taken care or have not been fully alive to the danger in which they are placing

their patients. I would not unduly blame, but I should be suppressing facts of the utmost importance were I not to mention that which has occurred many times in my attendance on the cases narrated in this report.

It is well to keep three suits of clothes in use when attending such cases, keeping those out of use before a very warm fire or hung out in the open air; the hands to be frequently washed, the nails short, and a good walk in the air should be taken before going to any other patient.

Where there are partners, it is advisable for one to attend the contagious cases, leaving the other to manage the midwifery, at least as far as possible. In any case too much care cannot be taken to prevent the lying-in woman being exposed to the chance of contagion.

The same rule should apply to the nurse, who should always be closely questioned on these points; indeed, the tendency of woman's dress to retain contagion, and the tendency in the class generally to conceal facts, require rather more than usually close inquiry.

In short, to impress on ourselves the necessity of every care lest we should convey these diseases, upon the public the necessity of strict separation of the pregnant woman from scarlet fever and other contagious diseases, upon nurses the need of strict purification, and upon the legislature the extreme importance which the checking of these diseases is to the mother, is the duty which appears to be impressed upon us after a perusal of this report.

*Death rate.**

GROUP I.—*Cause ascertained or probable.*

	CASES.		DEATHS.	
Class 1—				
A. With rash	20	37	13	27
B. Without	15		12	
Probable exposure . .	2		2	
Class 2. Erysipelas	6	31	4	19
,, 3. Diphtheria . . .	7		3	
,, 4. Typhus and typhoid . .	2		2	
,, 5. Decomposition of uterine contents . . .	9		4	
,, 6. Emanations from slough .	1		1	
,, 7. From puerperal fever .	1		1	
,, 8. Mania	4		3	
,, 9. Pyæmia from sore nipples?	1		1	
Total . . .	68		46	

GROUP II.—*Cause undetermined.*

A. Symptoms appearing before or at labour	3	3
B. Ditto upon third to fifth day . .	18	13
Total	21	16
Grand total . . .	89	62

* See remarks, page 46.

GROUP I. Class 1 a.

Case 1.—*Scarlet fever; death.*

Mrs. ——, in her third confinement, which was natural. She went on well till the third day, when sore throat and scarlet-fever rash appeared, with feverishness. The lochia and milk were shortly suppressed. On the fifth day she was somewhat the same, but with some incoherence and picking at the bedclothes, the pulse being then at 130 per minute. On the sixth day she had, although rational, a nervous excited manner, the pulse being about 150 per minute. All the other symptoms of scarlet fever were present. She had considerable power, and took fluid food well. The whole surface was very red, and the tongue glazed and red. She went on the same during the sixth night, and in the morning was going on composedly. She was left for a few minutes to encourage sleep, for which she felt inclined. Her husband entered the room shortly after and found her dying. She lasted only a few minutes. No necropsy was permitted.

Case 2.—*Scarlet fever; arthritic complications; mania; recovery.*

Mrs. Y—, multipara. Had been nursing with much anxiety her children in scarlet fever about a month before her labour, which was natural, succeeded by severe after-pains. Forty-eight hours after was covered with strongly marked rash of scarlatina and fever. There was sore throat. The next day but one the joints became tender and somewhat swollen. There was also slight wandering of mind. Five days after the eruption the joints were improved, and on the sixth day were well. But at this time delirium became constant. I saw her the eighth day after confinement. She was then manaical, except when spoken to, when she answered correctly. There was no tenderness over uterus, but some tympanitis. The urine was scanty. Pulse 120 per minute. Skin nearly free from rash, which had been universal. No diarrhœa. She had not slept since delivery. Under frequent opiates she slept and awoke much calmer; this was repeated next night, and from this time she improved rapidly, and in three weeks she was able to make a journey of many miles.

Case 3.—*Scarlet fever; death.*

Mrs. C—, multipara. Was delivered three weeks prematurely. She went on well for two days, when diarrhœa and vomiting set in with violence, pulse rising to 140 per minute. Tongue furred. She was not light-headed. Stimulants, opium, and ice were given. At the end of the third day these symptoms had abated a little, but shortly the tongue became brown and dry, and the manner was excitable. The pulse was 120—130, small and feeble. She had on the third day from the attack become covered by a scarlatina rash, well-marked; the throat was sore, and fauces like the skin. The skin was yellow. Lochia plentiful, no uterine tenderness nor joint complication. The day after, she was rather lower, pulse 130, and vomiting and purging had ceased. The vagina was in a red inflamed state, and not erysipelatous. The rash was not so brilliant, and the eyes were red, and she could not clearly speak, notwithstanding plenty of support and stimulants. She died at the end of the seventh day after her delivery.

Remarks.—The next day after, one of the children took it and shortly died. There was no evidence of her having been exposed to scarlet fever before delivery. Her medical man was attending two cases of diphtheria at the time of his attendance on her.

Case 4.—*Scarlatina rash; death.*

Mrs. P—. æt. 33, primipara. Had had a tardy labour from inefficient pains. Forceps were used without difficulty. A few hours after labour the pulse began to rise, and the next day it was at 120 per minute. Considerable pain and tenderness occurred over the uterine region, with enlargement of the uterus, the lochia being pale, scanty and offensive. A purgative given on third day acted with extreme violence, and tenesmus, which subsided in twelve hours. At the end of three days a rash came all over her at one time, like scarlatina, but rather more mottled, without sore throat. The tongue creamy, with red edges. She trembled much. These symptoms continued for two days, the pulse gradually becoming very rapid and weaker, and at the end of the seventh day she died. There was but little delirium. The urine was albuminous. She was the second wife, the former having died in childbirth.

Remarks.—Regarding the chance of her catching scarlet fever, it may be mentioned that her medical man was closely attending

scarlatina at the time. No one in the house or with whom she had been in contact had had it to the friends' knowledge.

Case 5.—*Scarlet fever; death.*

Mrs. H—, æt. 32, seventh confinement. Scarlet fever had been constantly in the house (a new one) for two months before her labour. She would not leave it, contrary to the advice of her medical attendant. The fever was mild in the children. Her delivery was very rapid, being over before her medical man could reach her. She went on well till the third day, when severe rigors occurred, with intense headache and rapid (140 per minute) fluttering pulse. From this she somewhat rallied, but the pulse never fell below 110, generally was 120, for the remainder of her life. On the fourth day there was diarrhœa and headache, and the scarlatina rash began to appear on face and neck; the lochia continued; no vomiting nor pain in uterus, &c. There was a tremor and nervousness in her manner, but no delirium. She continued fluctuating somewhat in this state, better or worse for ten days, when the tongue was becoming browner, the diarrhœa still being troublesome, with a tendency to vomit at times. The abdomen was tympanitic. There was then tenderness in lower abdomen, especially in left groin, where a distinct thickening was felt (cellulitis probably). There was evident tendency to sinking; she was irritable and restless, but dozing. The pulse was rapid and fluttering, which condition was relieved by large doses of æthereal stimulants. There were occasional sweatings. She died on the fifteenth day after delivery. The rash behaved as in an ordinary case of scarlet fever.

Case 6.—*Scarlet fever; recovery.*

Mrs. N—, æt. 28, primipara. After proceeding satisfactorily up till the fifth day, was taken with feverishness and slight delirium. In about forty hours after, a most marked rash began on the face, extending in a day or two over the body. She had a sore throat and injected tongue. The pulse rose to 130 per minute. On the third day of the rash it was on the lower extremities. The delirium was at this time nearly constant; throat sore, but better. These symptoms gradually subsided, and all anxiety had ceased on the twelfth day. The milk and lochia disappeared on the second day of attack.

Case 7.—*Scarlet-fever rash; death.*

Mrs. B—, æt. about 25. Had an easy labour and went on well till next day, when she was seized with quick pulse and pyrexia, sore throat and scarlet eruption, with slight delirium. This continued for three days, with much vomiting and diarrhœa. I saw her at the end of this time and found her with scarlet-fever rash all over, sore throat and tongue, which was dry and glazed. There was constant vomiting and diarrhœa, with pain in abdomen. Slight delirium. Had no milk for a day or two. Expression of depression. Her left wrist was swollen and painful, but I could find no other joint affected. Pulse 130, small. Skin very hot, with much thirst. She slightly improved next day, but the day following became lower, and died on the evening of the sixth day.

Case 8.—*Scarlet-fever rash; death.*

Mrs. S—, in her fourth confinement, which was natural. Was nursing a child who had had scarlatina for ten days. Had a sore throat for a few days before delivery. Her labour occurred at the expected time, but during it she was taken with shivering, which did not cause much attention at the time, but it was thought to be owing to the expansion of os uteri. On the third day a rash of scarlet fever appeared, and next day it was intensely marked throughout the whole surface. The tongue soon became dry and cracked, eyes suffused, and extreme prostration came on, and a general feeling of restlessness was felt. I saw her three days after the rash came out (sixth day). The rash was universal, raised above the level of the skin, and she had all the above symptoms very severely, but the pulse was exceedingly feeble, at 150 per minute, occasionally intermitting, respiration being 40 per minute. She was so feeble as to faint on moving the slightest. No milk. Lochia natural. No pains in the joints. No uterine tenderness. Bowels quiet. She rapidly sank twenty hours after I saw her. She had no delirium throughout.

Case 9.—*Scarlatina and arthritic complication during early pregnancy; abortion; recurrence of arthritic symptoms; metria, pyæmia, and rapid death.*

Mrs. B—, primipara, æt. 25. Stout healthy woman; had been married eight months. When about three months pregnant was

attacked by scarlet fever, after which arthritic swellings came on. About a week after that abortion ensued, the arthritic complication being better. Four days after the abortion the joints began to swell again, succeeded by considerable flooding; a day or two after the latter, symptoms of metritis and toxæmia set in, under which she sank in about thirty-six hours, the prostration occurring with great rapidity.

Case 10.—*Pelvic pains; febrile state; slight rash; scarlatina? recovery.*

Mrs. G--, æt. 21, primipara; probably prematurely confined. Labour was easy and rapid, and she went on well till the third day, when the pulse rose to 100 per minute, and she became feverish and sleepless, with perspirations, however, and dry, furred tongue. There was some slight pain in left groin, with tenderness. On the fourth day the symptoms were more marked, the pulse reaching 120 per minute. On the fifth day she was improved, and milk was secreted freely. The lochia up to that time were scanty, but became then free. For some days there was sweating, with sudamina, and an indistinct measle-like rash was visible for a day or two. After the seventh day she began to improve, the pelvic pain went off, and she recovered shortly without any check.

Case 11.—*Scarlet fever; death.*

Mrs. F—, æt. 37, eight children. Had a feeble labour, but natural. Went on well for three days. Then she was seized with feverishness, pulse 120 per minute, suppression of lochia and milk, and on the next day with diarrhœa and vomiting. These latter symptoms abated, but on the sixth she had a brown tongue, with swelling and pain in almost every joint; wandering in mind when not spoken to, picking at curtains, &c. The skin on the chest was covered by a thick rash, scarcely, if at all, elevated above the surface, intermediate in appearance between measles and scarlatina. She had none of the peculiar symptoms of either. The pulse was imperceptible at wrist on the sixth day, when I saw her, but she had much muscular power, considering. She died shortly.

Remarks.—It was said that two children had had measles in the *next* house, but they had gone away before the delivery. There had been no illness in the house of this patient before her confinement, but on next day her children were taken with scarlatina.

Case 12.—*Scarlet-fever; death.*

Mrs. E—, æt. about 25, primipara. Had been attending her stepchild in scarlet fever some weeks before her delivery, which was natural and at full term. Either the third or fourth day she was seized with feverishness and a sore throat, with a rash next day. The pulse 100 to 120. Wandering soon occurred, and vomiting with severe diarrhœa. She became rapidly worse, and on the sixth day I saw her with a surface intensely marked with scarlatina rash, slightly elevated. Tongue bright red, dry, lips parched. Severe thirst and wandering mind. Pulse 140, small. She rapidly sank, dying within eighteen hours after my visit, with purple lips and insensibility.

Case 13.—*Scarlet-fever rash; recovery.*

Mrs. G—, primipara. Confinement of twenty-four hours' duration; parts rigid. Retention of urine troubled her for a few days. This and a stupid nurse caused much mental excitability, and feverishness and sleeplessness, which symptoms lasted for five or six days. On the seventh day after delivery she was covered with the rash of scarlatina, which had probably been out the day before. There was then very little sore throat, nor, indeed, throughout her illness. The attack behaved itself like a mild attack of scarlatina, and she gradually improved, being convalescent at the end of three weeks. There was no diarrhœa—on the contrary—nor any vomiting.

Remarks.—Every person in the house was slightly affected by the same symptoms.

Case 14.—*Scarlet-fever rash; death.*

Mrs. M—, primipara. Two days after a natural labour became feverish without any other symptom than a pulse of 130 per minute, diarrhœa, vomiting, and delirium being absent. This continued till the fifth day, when the rash of scarlet fever appeared, without sore throat. The tongue then was moist, slightly furred. The lochia had ceased, and no milk had appeared. There was no tenderness about the uterus. These symptoms went on, with slight diarrhœa the next day, when she began to sink, and she died early on the seventh day.

Remarks.—This occurred during the severe epidemic of scarlet

fever, 1869. Of course the medical man had been constantly attending cases of scarlet fever. He informed me that within a few days after the death of this patient another of his puerperal patients was attacked with similar symptoms, without rash, but with red throat, and died in thirty-six hours.

Case 15.—*Scarlet-fever rash; death.*

Mrs. P—, æt. 31, primipara. Had a tedious labour, ending naturally. She went on well till the third day, when she was attacked by a severe headache, succeeding to rigors, after which the pulse rose to 120. General pyrexia followed, the temperature next day rising to 106° Fahr. She complained slightly of sore throat. These symptoms continued up to the middle of the fifth day, when drowsiness supervened, and it was difficult to obtain an answer from her. The urine was scanty and moderately albuminous, sp. gr. 1005. At this time a distinct, but not intense, rash like scarlatina had occurred over the body generally, on the face and neck slightly. The fauces were swollen and red; the tongue was creamy and red, and rather dry. Pulse 130—140; temperature 105°. There was slight diarrhœa, but no vomiting. The skin was soft and not dry. The sixth day she was much the same, rather more drowsy, with at one time sharp diarrhœa. Towards the end of this day the temperature dropped to 102°; the pulse 120—130. There was more coma, pupils small, and complete control over the evacuations had ceased. The urine still albuminous. Much difficulty of swallowing soon after came on, which increased till she died on the beginning of the seventh day. She had two or three slight convulsions shortly before death. The vagina appeared to be sloughy when examined but there was no offensive discharge and the lochia were free. The medical attendant had been shortly before attending cases of scarlet fever, and had a bad sore throat in consequence, as he thought, when he attended her.

Case 16.—*Scarlet-fever rash; mania; recovery.*

Mrs. P—, primipara. Had a moderately easy and natural labour. On the second day she was highly delirious, or as it is termed maniacal, screaming most violently the whole night. This continued during the third and the fourth day, and part of the fifth. During the fourth a rash of intense character appeared all over her

simultaneously, exactly similar to that of scarlet fever. The throat was red also. The pulse was 150. There was no local tenderness, nor diarrhœa, nor vomiting. The rash disappeared next day, but in a few days a red patch presented itself on the nose, something like incipient erysipelas; this, however, gradually faded. The active symptoms rapidly subsided, she took food well, and at the end of three weeks was about the house.

Case 17.—*Scarlet-fever rash; death.*

Mrs. S—, multipara. Had a quick and natural delivery. On the third day she became feverish, and shortly after a rash appeared all over the body simultaneously. She had some delirium, but was clear in her answers. The next day (fourth) the rash was very strongly out; the tongue red and dry; throat very dark red; speaking was difficult from this state and from mental dulness. There was no diarrhœa nor vomiting then. The pulse was 130 and feeble. There was some slight tenderness about the lower abdomen. At the end of the fourth day severe vomiting occurred without diarrhœa. On the fifth day the symptoms became more typhoid, with difficulty of vision, and she sank rather suddenly at last on the sixth day after delivery, or third of the attack.

Remarks.—Two of her children had been about two months previous attacked with a mild feverishness, accompanied by a rash something like scarlatina.

Case 18.—See also Case D, p. 104.

Case 19.—*Pyrexia, rash, recovery.*

Mrs. S—, multipara. Was delivered naturally, in a house into which the stable and cattle shed entered as a part. The house was very badly drained, the bedroom smelling strongly of ammonia. She went on well for three days, when diarrhœa set in with cough and rapid pulse, 120 per minute. A measle-like rash accompanied this condition without any other symptoms, either of measles or scarlatina. She gradually lost these symptoms, but was much depressed by the attack, but in a few weeks she was well again.

Remarks.—I could not find any account of measles or scarlatina having occurred in the house or neighbourhood previously.

CASE 20.—*Scarlet fever at seven and a half months of pregnancy; premature delivery; "puerperal fever" after subsidence of rash; death.*

Mrs. C—, æt. 23, primipara. Seven and a half months advanced in pregnancy, was attacked by a mild form of scarlet fever, the rash of which had been out four days, when she was delivered of twins in a natural manner. She went on without any serious symptom for three or four days, the rash subsiding. About this period feverish symptoms arose, with slight tenderness in region of uterus, but without swelling. The pulse rose up in two days to 130, and there was mental perturbation, with dry glazed tongue, thirst, and hot skin. The rash had quite gone off. There was no vomiting nor diarrhœa, nor arthritic complications. She was better next day, but her mother came down with a medical man, who without consultation with the medical attendant altered all the treatment, gave her porter, and took off much of the bedclothes; the result was that violent vomiting came on, syncope, and she died on the following afternoon, being about a week after her confinement.

GROUP I. CLASS 1 B.

CASE 1.—*Puerperal fever; death. Scarlet fever in children after.*

Mrs. —, multipara. An excitable woman, was delivered naturally. On the third day pain commenced in the uterine region, particularly in the right groin. Some excitement of mind was also present and sleeplessness. The pulse was at 120, and she was thirsty. The lochia were scanty and offensive, and the milk was scanty throughout the case. She continued much the same, though with less heat, for two days more, when on the sixth morning she was attacked with most violent diarrhœa, the pulse rising to 134 per minute and very feeble. She felt great exhaustion, and refused food; there was, however, no sickness. The pain was severe in the right groin and it was very tender on pressure; in the other part of the abdomen she could bear pressure fairly. The diarrhœa ceased towards the end of the sixth day, and she rapidly sank during the night. She had no rash.

Remarks.—The day after her death two of her children were attacked by malignant scarlet fever and shortly died.

Case 2.—*Puerperal fever; death. Three sources of scarlatina.*

Mrs. ——, multipara. Had been confined three days when rigors, succeeded by feverish symptoms, came on. She was quickly delirious, and suffered from vomiting and diarrhœa; furred brown tongue. The symptoms rapidly became typhoid, and she died on the fourth day of the attack. No rash was discernible on her.

Remarks.—The history was as follows. There were three sources from which she could have been infected by scarlet fever :—1st. Her medical man was attending cases on the same day, and entered her room with his topcoat on, which he always kept on in the room of the scarlet fever cases on purpose to protect his other clothes. Inadvertently he came in to attend her with it on. 2nd. Her husband was a ragged-school teacher, and was at the time visiting all sorts of contagious cases. He attended upon her as more or less nurse through her confinement. 3rd. Her medical man, in going a mile off to see a scarlatina case, recognised the nurse. She had been attending in the house on cases of scarlatina before she went to the above-reported labour.

This case shows how difficult it is to find out the whole surroundings of these cases.

Case 3.—*Puerperal fever; death. Scarlet fever in house.*

Mrs. M—, multipara. Had been delivered naturally. A few (three or four) days after, she had rigors, succeeded by slight fever and slight peculiarity of manner; loss of appetite and a sallow skin. There was added next day some little diarrhœa, but the symptoms were not strongly marked—indeed, but little anxiety would have been aroused had it not been that one or two joints became swollen and tender. The most marked were the knuckles of one hand. This state of things continued slightly to increase in severity till about the tenth day, when collapse came on rather suddenly and she sank in a semi-typhoid state, two or three joints having been affected besides the knuckles. There was no rash worthy the name on her throughout the illness.

Remarks.—On asking if any other case of illness was in the house,

I found she had been attending her child for a few days before her labour. Her child was ill of scarlatina, attended by another medical man, at the time, and lying in another room.

Case 4.—*Pyæmia, &c.; death. Scarlet fever in house for five weeks before, and beside her during and after labour.*

Mrs. B—, multipara, in poor circumstances. For some time before labour her children had been ill with scarlet fever, who were in her bed at the time of labour, both before and after. She had an easy labour, but shortly after was attacked by feverishness, delirium, furred tongue. Pulse 120. The tongue was white, furred, and there was severe thirst; no diarrhœa, but irritable stomach. She remained in this state for five days, when they subsided, but at this time there was a deep swelling above right elbow. I did not see her for some days, when I found her much worse, delirious, deaf, vomiting, tongue red and glazed, very thirsty, but unable to retain the fluid, the arm much more inflamed. She was removed into Guy's Hospital for better nursing, and shortly began to improve, the redness and swelling in arm subsided, but another over left forearm was noticed, but the skin over was not inflamed. Her temperature all this later illness was not up to the normal standard, the pulse only at 70. However, the deafness went off, her appetite returned, and at the end of a month after delivery she was rapidly improving, when a severe loss of blood occurred from the uterus at her first menstrual period, which reduced her excessively, the appetite being much affected. She, however, was slowly recovering when she suddenly died. No post-mortem was permitted.

Remarks.—On the third week of her illness she was covered universally with a rash like erythema. It lasted three days, and was unattended by any additional symptoms.

Case 5.—*Feverishness, &c.; cellulitis; recovery. Scarlet fever in house.*

Mrs. W—, æt. 42. After this her tenth confinement, which was easy, she had a good deal of pain outside of the right thigh. She, however, soon recovered of this, and went on well till the ninth day, when she was seized by a severe pain and tenderness in the lower part of abdomen, accompanied by fever and nausea,

and irritable bowels, without much diarrhœa. After a few days this began to subside, but she continued in a variable condition for some weeks with occasional sweatings. I found at this time tenderness in groin, with hardness, and there and down the sheath of the femoral vessels an inch or two, which gave pain on moving the thigh, but there was no sign of suppuration going on.

Remarks.—At the time of her delivery her children were recovering from scarlatina. Suppuration subsequently took place, but she soon recovered.

Case 6.—*Puerperal fever; death. Medical man attending twenty cases of scarlet fever per diem a few days after lost another case in scarlatina maligna.*

Mrs. N—, æt. 23, primipara. Had a natural labour, of only a few hours' duration, without any flooding. On the fourth day was seized with rigors alternating with flushes of heat. The pulse rapidly rose to 130. Head was hot and she was early delirious; she had slight vomiting and diarrhœa. These symptoms increased in severity till the pulse rose to 170 on the eighth day of the attack, when she died in a typhoid state. There was but slight abdominal tenderness throughout. No rash was visible.

Remarks.—This case was attended by a medical man who had seen twenty cases of fever (principally scarlet fever) on the day of attending her. I am indebted to him for giving the following information:—"The day after I met you I had another puerperal patient attacked with the fever, who has since died. The symptoms were the same as seen in Mrs. N— (the above patient), but of a more severe type. The scarlet-fever rash was fully developed over the whole body, but of a dusky hue. She had a natural labour and quick, without flooding; was seized with rigors on the fourth day, the rash appearing on the fifth. No vomiting, but slight diarrhœa; pulse over 140, irregular; much delirium. There was enlarged and tender uterus, but no tympanitis. The fever was first dynamic, but on the second day it became adynamic, and she died comatose on the seventh day after labour, but on the third of the attack.

Case 7.—*Feverishness and cellulitis; recovery. Scarlet fever in the children.*

Mrs. ——, in her third confinement, which was slow and apathetic, but otherwise natural. The lochia lasted only a few days. She had

about this time lurking pain in pelvic organs, with pyrexia, but did not appear very unwell; indeed, she slowly seemed to improve and went out of doors after three weeks. After this exertion she was taken with severe pain in right side of pelvis, with much fever, and was again laid up. I saw her ten days after, and found a large swelling the size of two fists apparently in right broad ligament. Symptoms of hectic were present. I did not see her again, but I heard that she recovered slowly after some months' illness.

Remarks—On inquiry I found that scarlet fever had been in the next room at the time of delivery.

Case 8.—*Puerperal fever; death. Scarlatina in the house.*

Mrs. H—, primipara. She had a natural delivery, and went on well till third day, when she was said to have caught cold, and somewhat improved till the seventh day, when she became worse, and her attendants thought they noticed a rash, but it was very transient if so, not being perceptible to the medical man shortly after. She had a quick pulse, and was in a low depressed state, with no marked symptoms. The lochia continued for twelve days, when she appeared to improve so much so that her doctor did not call on the thirteenth day. When he did so he found her apparently dying; within a few hours after, she sank almost suddenly. The tongue was red for some time during her illness and she had a sore throat for a short time.

Remarks.—Her history was as follows. She had made a runaway match, which caused much anger in the family and depression on her mind. She had left her home, however, to be confined near in lodgings. The day after taking the apartments scarlet fever broke out in the house she had just left, and the medical man who was to attend her was called in and continued to see them. She was confined three or four days after by the same medical man, and, furthermore, her mother and sister came backwards and forwards to nurse her.

Case 9.—*Puerperal fever; death. Scarlatina in husband.*

Mrs. ——, primipara. Stout woman; had an easy labour and went on well till the third day, when she was taken with pains in the joints, high fever, and became light-headed. The lochia became colourless, and the milk was not secreted during her illness. She went on with these symptoms till the seventh day, when the delirium,

which was violent, subsided into stupor, and almost coma, the urine being passed unconsciously; the pulse very rapid and feeble. She died on the eighth day in a state of insensibility.

Remarks.—In this case the husband was attacked with well-marked scarlatina about the time his wife was confined, and was only just able to move about. When I saw her on the seventh day the wife had no rash on her, at least, not sufficiently marked to be recognised.

Case 10.—*"Puerperal fever;" death.*

Mrs. R—, primipara. Had a hard delivery, accomplished by natural powers, but with rupture of perinæum. Went on well till the next day, when there was rather severe loss with the discharge of a clot. Shortly after this the temperature and pulse rose, the latter being at end of second day 120 per minute, the former 105° Fahr. Diarrhœa at this time set in rather sharply, without vomiting. At this time I saw her. The pulse was 130 per minute, weak and fluctuating. Hot, dry, and dusky skin; punctiform rash somewhat petechoid in places. Throat injected, but not complained of as sore. The tongue was slightly furred; no great thirst; taking her food without trouble and with some appetite. There was a trembling manner, and she sighed frequently, complaining of a sense of suffocation.

She sank rapidly, dying ten hours after I saw her, the diarrhœa continuing till the last. She continued also to take nourishment, but the heart-power gave way, producing much precordial distress. There was no delirium.

Remarks.—The medical man in attendance in this case informed me that he was seeing some cases of scarlet fever in the desquamative stage close by, but it did not appear that she was exposed to any other contagious complaint from any other source.

Case 11.—*Puerperal fever; death. Husband and nurse attacked by severe symptoms; scarlatina* (?).

Mrs. D—, æt. 24 years, primipara. Stout, rather pale in appearance. Had had typhus fever two years ago, since which she had not regained her strength. She had had also during the latter months of her pregnancy some feverish symptoms, with furred tongue occasionally. She had a tolerably easy labour, with a free hæmorrhage after, but not too much so. About twenty-four hours after, she had a severe rigor, succeeded by hot, dry skin; pulse 120.

Much thirst, rapid respiration. She shortly after became delirious, and at the end of forty-eight hours the pulse was at 130 per minute, the remaining symptoms increasing. During this period the lochia were natural, but after this they ceased and there was slight abdominal tenderness all through her case. There was tendency to watery diarrhœa. The tongue was furred. No vomiting on the fourth day after delivery. The tongue became black with increase of the delirium. Rapidly the powers gave way and she died on the night of the fourth day, and of the third of the attack.

Remarks.—Two or three of her relations had died in childbed, which had rendered her very apprehensive as to her recovery. But it is to be remarked that on the day after the first of her illness her nurse was also seized with a severe rigor, succeeded by sore throat and high fever. She had already had two attacks of scarlatina. She was some time recovering.

On the same day as the nurse was, her husband was also attacked with exactly the same symptoms, but recovered more quickly than the nurse. He had had scarlatina some years before. The medical man had not seen a case of that exanthem for ten days previous to the confinement of Mrs. D—. I should add on none of the three patients was any eruption observed.

CASE 12.—*Puerperal fever; death. Scarlatina in house.*

Mrs. S—, in the eleventh confinement, which was easy, succeeded by imperfect contraction of uterus and a very free discharge for four or five days after, when it ceased. About this time she became feverish, and complained of tenderness of skin of back left thigh, which was red and inflamed. Next day it was rather better, but over the calf on same leg the same subcutaneous inflammation appeared. On the seventh day she had a pulse 130 per minute, very feeble; was drowsy; her face was pale; the tongue was dry and brown, with slight diarrhœa, without vomiting. No rash was observable throughout.

Remarks.—I found that she had been nursing two daughters for a month before, who were suffering from sore throat and what was called inflammatory fever, but the medical man did not feel certain whether it was scarlet fever.

CASES 13, 14, 15.—See also Cases C, E, and G, pp. 103-5.

GROUP I. Class 2. *Erysipelas.*

Case 1.—*Fœtus dead in utero; erythematous erysipelas; death before delivery.*

I was called to a dying woman; she was pulseless; her history was as follows. She was at the end of the seventh month of her first pregnancy. She went on well till about three weeks before, when she had a kind of rigors, but without much ill health. She, however, thought the child was dead, as she had not felt its movements. However, she had recovered after five days so far as to be in as good spirits as possible. Four days she was seized with most severe rigors and coldness, succeeded by pains all over her, after which she felt pretty well for two days, when slight uterine pains came on. Her medical attendant found the os open scarcely sufficient to admit a finger. He was shown a patch of inflamed skin on the outer surface of left arm. This spread the next day, so as to cause general swelling of the arm and part of the forearm. It also appeared on the other arm, which was also generally swollen. She was much depressed, took very little, but up to twenty-four hours before death wished to get up and to be moving about. However, about this period she became rapidly lower, the membranes ruptured and a putrid discharge came away, and it was clear the child was dead. But there was no further effort of the womb to expel its contents. I found patches of erythematous erysipelas well marked in outline and livid. The arms much swollen. The urine was albuminous and high coloured.

Case 2.—*Erysipelas just before delivery; labour; recovery.*

J. P— was in her eighth month of pregnancy. She was admitted into Guy's Hospital for a graze on her leg by a cab-wheel on May 4th, 1865. On the fourteenth day the part was attacked by erysipelas. By the 27th the erysipelas had disappeared. On the 30th she was delivered of a living child naturally. The next day the erysipelas returned, spreading shortly over the entire leg to the groin. On June 5th, the complaint being at its greatest extent, she was surly and petulant. The next day she was in violent delirium, and the milk was suspended. A dose of morphia calmed her down. On the 8th she improved and the milk returned. From this time she made a good recovery. The condition of the lochia was not given me.

Case 3.—*Erythematous erysipelas some time before labour; delirium and fever; measle-like rash; death.*

Mrs. ——, primipara, æt. 24. Rather more than a week before labour she had an eruption on her legs, which was described to me by the medical man like erysipelatous erythema. It travelled upwards, and was near the body by the day of labour. The case was natural, and the same day she was light-headed, with quick pulse and much thirst. The lochia were scanty next day and so continued. She lasted in this state till the sixth day with slight improvement. I saw her on this day, and found the whole upper part of the body covered by a rash like measles, crescentic groups rather wide apart. She was tolerably coherent when roused, otherwise wandering. The tongue was furred, not brown; there was thirst; pulse 100. Bowels rather confined; no vomiting. The delirium and feverishness increased, and she sank ten days after delivery.

Case 4.—*Death in mother with anomalous symptoms; erysipelas in nurse and infant.*

I was called to see a woman who had been delivered a few days before. About the third day she appeared ill, but the pulse was only at 70 per minute. She had next day a curious nervous manner, with slight wandering. On the sixth day the pulse was the same; tongue furred; some tenderness on the knee, which was also swollen, and slight wandering and nervous manner; otherwise the condition was natural. The seventh day suddenly the pulse rose to 120, and coincident with it she began to become pale, cold, and sank in twenty-four hours in a state almost approaching collapse.

Remarks.—The day after she died the nurse was attacked by erysipelas of head and face, ultimately recovering. The day after that the infant also was attacked and died after a short illness.

Case 5.—"*Puerperal fever;*" *erysipelas in daughter subsequently; death.*

Mrs. W—, æt. 40. In her fifth confinement, easy delivery. Seized with shivering on the third day, succeeded by pyrexia, and pulse 120 per minute, which continued with slight confusion of mind till the sixth day, when tympanitis, delirium, and typhoid symptoms super-

vening, accompanied by diarrhœa and vomiting. Saw her on this day and found her pulse very feeble and rapid, temperature low, hands and feet cold—in fact she was sinking. The tongue was put out tremblingly and uncertainly, and she was partially wandering in mind. She died soon after.

Remarks.—On inquiry as to the health of the other inmates I found that one of the daughters, about fourteen years of age, had on that day been attacked by erysipelas of the face extending over more than half one side already. She had been frequently in the room of her mother. The rest were well.

Case 6.—*Erysipelas ten days after delivery; recovery.*

Mrs. W—, multipara. After an easy labour had an attack of eclampsia, to which she had been accustomed many years. The urine was albuminous after, but this symptom ceased soon. About the third day she had severe pain in pelvic region; pulse 120 to 130; furred tongue and hot skin; great debility, but no delirium. She remained in this state for ten days, when the vagina became first inflamed and swollen and red. Next day this passed on to the skin around, extending shortly over the buttocks to the waist, and down the legs to the knees. About the vulva it was vesicated, but as it spread it assumed the form of Erythema vagans, and at last like E. nodosum. A day or two after the first appearance she became much better in constitutional symptoms, and about five weeks after labour was in a fair state of health, though feeble.

GROUP I. Class 3. *Diphtheria.*

Case 1.—*Diphtheria; recovery.*

Mrs. ——, multipara. She had been some time before labour in a depressed mental state, fearing lest something should go wrong in her delivery. Her pains were weak, but labour passed off well. But after a day or two feverish symptoms arose, accompanied by some little pain in abdomen, sore throat, and uncomfortable state of mouth, the pulse being at 100 to 110 per minute. The tongue was furred and the throat sprinkled with white patches. This in a day or two spread over the throat and on to the tongue, but not completely so. She remained five or six days in this state, with little appetite, and

weak small pulse of 100. Slowly this condition went off, and she was pretty well in about three weeks.

Case 2.—*Diphtheria; recovery.*

I was called in to this patient on the fourteenth day after delivery. She had suffered from very offensive lochia, and had had very troublesome diarrhœa. However, she had recovered nearly from this and had left her room. But she had had also much pain over the uterus ever since labour. Three days before I saw her she was taken with much debility, and there were symptoms of chest complication. I found the left lung full of crepitus, bronchophony, and dulness to the apex; nails and lips livid; breathing very difficult; tongue brown and moist, with white patches; soft palate covered with uninterrupted diphtheritic membrane; slight soreness of mouth; pulse 140 per minute, very feeble; skin natural. She was stimulated well, and ultimately she recovered, but was a long time debilitated.

Case 3.—*Diphtheria; mania; secondary hæmorrhage; recovery.*

Mrs. R—, æt. 23, primipara. Of very excitable temperament; was delivered naturally a fortnight before, since which time she had three or four attacks of profuse secondary hæmorrhage. She became maniacal on the fifth day, and had sore throat on the seventh, which has continued ever since. The pulse had continued since the fifth day at 120 per minute. The face had not been flushed. I found her up and dressed, very excited; pulse 130 to 140, very feeble indeed; skin cool; face pale; tongue dry and brown; throat covered with diphtheritic exudation. The hæmorrhage was still going on in gushes. Diarrhœa absent. Stimulants, iron, secale, &c., were ordered. The throat gradually got well, but, the maniacal state continuing, it was necessary to remove her to an asylum.

Case 4.—*Diphtheria; death.*

Mrs. S—, æt. 40, mother of six children. Was delivered rather prematurely and very quickly. She went on well for ten days, and had sat up a day or two. On the tenth day she was attacked by rigor, succeeded by pyrexia. The next day she was the same, but on the

following tenderness in one knee arose, and the day after of the opposite ankle. They both became swollen and red, with pain on moving. One eye also was inflamed. There was no pain in abdomen, nor swelling. On the third day after the rigor the throat was red, and a few white patches appeared; this increased, and on the sixth day the fauces generally were covered by diphtheritic membrane. The tongue was white and coated with a pseudo-membrane. These symptoms continued for some days, when they gradually subsided, no trace of swelling existing in knee nor ankle, and the eye, which had shown opacity in the aqueous chamber, became nearly well. Everything seemed to be favorably proceeding, when, on the sixteenth day after the rigor, she suddenly sank in power, and in twenty-two hours more she died, being unaffected by the stimulating treatment adopted.

Remarks.—There was no soreness of throat; indeed the condition might have passed unobserved had not I made a habit of always examining the throat in puerperal diseases; indeed, she insisted that there was nothing the matter there.

Case 5.—See Case A, p. 103.

Case 6.—*Puerperal fever, &c.; death. Exposed to diphtheria, and possibly scarlet fever.*

Mrs. C—, æt. 38, multipara. Had an easy labour. On third day was taken with rigors, succeeded by pyrexia, very rapid pulse, and semi-delirium. The next day the right leg was attacked by a large patch of inflammation, which spread. The skin was red and swollen, but it was not erysipelas. I saw her next day; she was in a trembling nervous state, semi-delirious; pulse 120 to 130; tongue brown, with thirst and vomiting. The leg was swollen and red for half its extent. She was rapidly sinking into a typhoid state, and died the sixth day after labour.

Remarks.—I could find no source of a contagious cause beyond the fact that the medical man was in frequent communication with a case or two of diphtheria at the time of attending her, and scarlet fever was in the garden behind her house.

Case 7.—*Diphtheria; scarlet fever in house; death.*

Mrs. ——, æt. 37, was delivered naturally of her seventh child. She was feverish after a few days, and had abscess in the elbow, but,

with some feverishness, improved slightly for two weeks, when she again became more febrile and light-headed, with weak rapid pulse. I saw her at the end of the third week and found the pulse at 120, weak; the mind was slightly wandering; tongue was very dry, and glazed; the fauces, soft palate, and throat, were covered with a whitish diphtheritic membrane. She had no appetite; vomiting and diarrhœa were absent. The diphtheric symptoms continued, and she died at the end of the fourth week after delivery.

Remarks.—Scarlet fever was in the house before the lying-in and during the remainder of her illness. No rash was visible on the mother.

GROUP I. Class 4. *Typhus or Typhoid.*

Case 1.—*Puerperal fever; exposed to typhus or typhoid fever; death.*

Mrs. ——, æt. 30, multipara. Was delivered easily and naturally. The lochia continued for a week. She had some little pelvic pains a few days after labour, with quick pulse; these symptoms subsided in a day or two, and she sat up about the tenth day. However, about the thirteenth day she was taken with shivering after drinking cold water, which she said had chilled her. This was succeeded by light fever, light-headedness, thirst, and pulse 120. There was no pain in the abdomen. The day succeeding the attack she was drowsy, very prostrate; pulse 120; had slight diarrhœa, without vomiting; great heat of skin. She complained of pains of limbs and joints. I saw her in the afternoon of this the second day, and found the knuckles of each hand red, much tenderness of both legs, especially of the ankles. She was very drowsy, with small pupils; tongue brownish thick fur; very thirsty, and skin hot. The pulse was splashing, very compressible, 120 per minute. She died the third day of the attack.

Remarks.—She was nursed by her sister, whose two children had recently died of continued fever. She had come straight from her house to nurse her.

Case 2.—*Typhoid on same bed; death.*

Mrs. ——, multipara. Had been confined ten days when she was taken with symptoms of so-called puerperal fever, and died in a few days.

Remarks.—Before her confinement her five children were ill of low fever, and during the labour one, still suffering from the same complaint, was lying on her bed all the time, contrary to the remonstrances of the midwife attending her.

GROUP I. Class 5. *Offensive lochia.*

Case 1.—*Offensive lochia; mania; recovery.*

Mrs. S—, æt. 32, six children. Delivered rather prematurely, hæmorrhage occurring both before and after. She went on well till the third day, when she had rigors, succeeded by feverishness and pulse at 120 per minute. Tongue furred; lochia scanty; milk scanty; with diarrhœa and depression of the powers, induced partly by purgatives and antimony given to reduce the fever. The pyrexia was somewhat reduced, and the pulse descended to 100 per minute on the sixth day. By this time the lochia were very offensive, but more natural in colour. Support, bark, and vaginal washings were ordered. She went on improving for three days more, when, a violent thunderstorm occurring, she became much excited with hysterical mania, succeeded by very great depression, faintings, &c. The milk went quite away, and the lochia continued offensive. She improved for three days, and became quite maniacal, the skin being cool, slight thirst, tongue furred. She took nourishment fairly. Opium and morphia failed to do well, rather increasing excitement. However, she gradually became more rational, and was able to be removed from home in about three weeks after delivered, and she gradually recovered her strength.

Remarks.—There was at first a slight tenderness and swelling on the right side of the uterus; this passed off soon. The offensive discharge appeared to me to have been owing to a retained clot.

Case 2.—*Offensive lochia; mental excitement; pain in abdomen; recovery.*

Mrs. ——, æt 21, primipara. Excitable temperament. Had a natural delivery till the fifth day, when she suffered from pain in abdomen. The lochia were scanty and offensive, the pulse quick. These symptoms continued till the eighth day with some fluctuation, the pulse at one time rising to 160 per minute. On the eighth day

mental obtuseness came on, succeeded in two days by excitement. Gradually this abated, and the pulse was reduced to 100 at the third week. There was, however, sweating, slight feverishness, glazed tongue. No diarrhœa and appetite moderate. These conditions gradually subsided and she recovered after some weeks.

Case 3.—*Portion of placenta retained, succeeded by local symptoms, and general toxæmia; death.*

Mrs. H—, fifth confinement. Had adherent placenta once before. This time she was delivered of the child before her medical attendant's arrival. The nurse pulled at the funis, which broke away from the placenta. Upon the attendant's arrival the placenta was found firmly adherent. He had much difficulty in removing it owing to her restlessness in the operation. She went on well for three days when pain came on, with offensive discharge, tympanitis, furred tongue, and rapid pulse. I saw her in six hours; but just before she had expelled with much pain an offensive portion of placenta and a little coloured discharge, after which she was relieved and cheerful. The pulse at 100; skin cool; and the excitement nearly subsided. For three days more she went on well, taking food fairly but with a slightly furred tongue; but at the end of the sixth day pain came on in abdomen, quick pulse and tympanitis. After six hours she became much depressed, gasping, faint, sweating freely, but cold and much depressed; pulse 120 per minute, with some slight peritonitic effusion. From this state she went rapidly downward and died from collapse in twenty-four hours after the renewal of the symptoms.

Case 4.—*Abortion; fœtid discharges; toxæmia and death.*

Mrs. B—, multipara. Aborted about the third month. After a few days had diarrhœa, pyrexia, and offensive state of lochia. She became worse day by day so that at the end of a week, after aborting, she was delirious, vomiting, severe pain in abdomen, with tympanitis, rapid pulse accompanying. The uterus was washed out for two or three days. She died at the end of the eighth day.

Case 5.—*Offensive lochia; mania; recovery.*

Mrs. ——, primipara. Labour natural. Went on well four or five days, when she became light-headed; this continued more or

less till I saw her on the eighth day after delivery, sometimes she was violent. The pulse was 120 per minute, very feeble. There was profuse sweating, slight diarrhœa at first, but afterwards it subsided; milk was not secreted. Lochia subsided gradually, and were colourless when I saw her, offensively smelling at times. The uterus was swollen at first, but soon became natural. No pain in abdomen, but some tympanitis. The tongue was furred and dry in centre. The maniacal symptoms were marked but not extremely severe, and yielded to the influence of morphia in a most satisfactory manner.

Remarks.—Her mother had had some maniacal symptoms before, and had been taken seriously ill the day before the labour of her daughter. This had much affected the latter.

Case 6.—*Abortion; offensive discharge: arthritic pyæmia; death.*

Mrs. ——, stout woman, aborted imperfectly. After the third day was attacked with pyrexia, furred tongue and pains all over. This state increased till the joints swelled, and she sank in a typhoid state about the thirteenth day after abortion. On the third day the discharge was scanty and very offensive. I saw her about two days after the offensive discharge came on, when she did not appear so seriously affected. I advised the uterus to be washed out, which was accordingly done for about four days after.

Case 7.—*Offensive lochia; formidable symptoms; recovery.*

Mrs. L—, primipara; delivered a week; had been ill three or four days. I found the room very offensive from the discharge from the vagina. The pulse was 120 to 130; temperature 106° Fahr.; tongue brown and dry in the middle; skin dry; respiration quick. Considerable delirium and hurry of manner. Milk was not secreted; the lochia very offensive and colourless. She had the appearance of one hastening to a fatal termination. The uterus was washed out every day with weak watery solution of permanganate of potash; soon after the first day she made improvement, and by the fifth day so much so that the injection was omitted. Symptoms of fever recurring, as also of the offensive discharge, the ablution was repeated, and finally omitted after the tenth day. With occasional drawbacks she recovered without any serious complications.

CASE 8.—*Offensive lochia. Irritative fever; clot in uterus; recovery.*

Mrs. ——, æt. 38, multipara. Had after labour severe flooding; after this most offensive discharge of a brown kind came from the uterus. Feverishness and depression with feeling of sinking came on, and continued up to the tenth day, when I saw her. A clot excessively offensive came away on the eighth day, and after that the discharges were intermittent. The pulse, when I saw her, was 110 per minute; tongue slightly furred. There was no uterine tenderness nor swelling around. She complained of constant sensation of faintness. I washed out the uterine cavity with warm weak lotion of permanganate of potash, but it required two quarts of it to cleanse it. She gradually recovered without any untoward symptom, but the offensive discharge continued for some days. The veins of both thighs behind were much inflamed; but it appeared this was so before delivery, though not so much so. These improved, but threatened to suppurate at one time.

CASE 9.—*Offensive lochia; acute puerperal mania; pyæmia, recovery.*

Mrs. W—, wife of a medical man, primipara. Had a tardy labour, requiring the use of the forceps. About three days after she had scanty, offensive lochia with pyrexia. This latter state was not severe, and about the tenth day she was able to lie on the sofa, but during the whole time she slept scarcely an hour. About the tenth day signs of mental illusions were noticed, which gradually increased till I saw her, three weeks after delivery, up to which time the insomnia continued. About the sixteenth day after labour the feverishness increased, with furred tongue, and swelling and tenderness over the wrist appeared on the nineteenth day; about the twenty-first she had swelling and tenderness over the opposite scapula. The pulse on the sixteenth day was about 120 per minute, and temperature 104° Fahr. This subsided gradually, and on the twenty-first day the pulse was 110 per minute, and the temperature 102°. Gradually the symptoms subsided, but suppuration was distinct over the swollen parts, and also over the gluteal region. These deposits were opened, and gradual improvement took place, succeeded by ultimate recovery.

Remarks.—The lochia ceased to be offensive after a week's duration. There was very little tenderness about the uterus. The insomnia ceased upon a dose of Succus Hyoscyami and bromide of potassium.

GROUP I. Class 6. *From sloughing wound.*

Case.—*Puerperal fever from poison of sloughy wound.*

Mrs. ——, primipara. Healthy. Had a natural, but rather quick delivery. On the third day she was attacked by rigors, succeeded by feverishness and delirium. The next day the symptoms increased in severity, the pulse reaching to 130. She was wandering in mind, and had a hurried tremulous manner. The lochia had ceased. She rapidly sank into a typhoid state, and died about the sixth day after delivery.

Remarks.—This case occurred completely in the country, in a healthy spot. The medical attendant informed me that he had, on the day of her labour, and for a few days before, been in attendance on a man whose hand was sloughing, and which he had dressed twice each day, that just before going to her he had been engaged in dressing the slough.

GROUP I. Class 7.

Case.—*Puerperal fever, conveyed by medical man; death.*

Mrs. A—, primipara. Natural labour. On third day was seized with the usual symptoms of puerperal fever, of the asthenic form. I saw her on the sixth day. She was tremulous, declared herself very well, and was tolerably clear-headed. The pulse was 140, weak and variable. She had besides this retention of urine for the day previous; the tongue was brown, and put out jerkily. She rapidly sank, dying within twenty-four hours, on the seventh day after confinement. Her history was as follows. Her medical man (Mr. A.) informed me he had been attending a case of "puerperal" fever in a single young woman who had died. While attending her he delivered Mrs. A. During the period which elapsed from the breaking out of the

puerperal in the first and the serious illness of Mrs. A., he attended twelve persons in their confinement, the first being Mrs. A.; the next one was very seriously attacked with same symptoms, but recovered. The next also, but not so severely. Of the remaining nine one was ill, but not so much as the others. The rest escaped.

GROUP I. Class 8. *Mania.*

Case 1.—*Acute mania; recovery.*

Mrs. ——, primipara, æt. 24. Subject in childhood to chorea, and has had formerly an attack of rheumatic fever, but without its leaving trace of cardiac disease. She was always irritable and excitable. Had an easy labour, and went on well till the third day, when there occurred slight feverishness and quick pulse. This continued for three days, when symptoms of mental excitement appeared. The milk and lochia ceased, and the pulse rose to 120 per minute. The mental excitement became excessive; it was very difficult to control her; she jerked out her tongue. The pulse at the end of the sixth day was 160 to 180 per minute. The skin was not hot; the tongue furred, but not brown. The breath smelt like sour milk, but she had taken none. Two grains of morphia had been given in the day without much result. This was continued during the night. She slept three hours, awoke very exhausted, but free stimulation revived her, and she soon became rational. After this she gradually improved.

Remarks.—Her husband was away at sea, which, I understood, gave her some anxiety.

Case 2.—*Mania; death.*

Mrs. ——, æt. 30, primipara. Had been partially maniacal during pregnancy. Was delivered naturally. Shortly after she became much excited, with insomnia. Pyrexia with rapid pulse came on, with mania on the third day. This state continued, with slight subsidence of the pulse, till the sixth day, when I saw her. Her pulse was 130 then, but the maniacal excitement had passed off, and a sullen quietude had supervened. Tongue was brown; no vomiting. The lochia had been somewhat, but not markedly, offensive. She sank the next day.

Case 3.—*Puerperal fever; mania; death.*

Mrs. B—, æt. 25; in her third confinement; delivered very naturally. She went on well for three or four days, but with sleeplessness. On the fifth day the lochia ceased and the milk, and there was some wildness in her expression, and she complained of noises and singing. The pulse 110 to 120; urine pale and free, albuminous. There was vomiting and diarrhœa. The uterus was slightly larger than normal, with tenderness in it and in right groin. Shortly she became maniacal and very violent. Skin hot; tongue furred. She continued, with slight fluctuations, in these symptoms for eight days, becoming, however, more typhoid, when she became apparently better for twelve hours, but she shortly sank, dying on the twelfth day of the attack.

Remarks.—The urine was albuminous early in the disease, but gradually its quantity decreased, so that on the day of her death no trace of it was to be found. The mania was very severe throughout, and rather increased than improved by opium.

Case 4.—*Post-partum hæmorrhage; puerperal mania and phlebitis; death.*

Mrs. T—, multipara. Had "brain fever" three years since; had arrived from Cape of Good Hope, having left her husband behind her. She was always liable to flooding after her labours. After the last labour she was nearly carried off by flooding after delivery of placenta, leaving her quite blanched. About the fourth day after she began to show signs of mental peculiarity, which gradually increased to violent mania. About the twelfth day after delivery symptoms of phlegmasia dolens appeared, extending rapidly in left leg. For four more days she continued maniacal, but gradually became weaker, and sank on sixteenth day after delivery.

Remarks.—The medical attendant was attending two cases of scarlet fever at the time, but there was no sore throat nor rash.

For other cases of mania see "Offensive Contents of Uterus," Class 5, p. 96.

GROUP I. Class 9.

Case.—*Arthritic pyæmia from sore nipples* (?) ; *death.*

Mrs. M—, æt. 42, multipara. This was the case of a lady who went on well till the twelfth day, when she had rigors, but she did not feel very ill after. On the eighteenth day she became worse, and on the twenty-first sent for her medical man. There was nothing abnormal in or about the uterus, nor did there seem anything there to explain the state. But the nipples had been sore and cracked, and there was a cellulitic thickening above the nipple, with a blush on the skin at that part. However, on the twenty-first she had vomiting, which continued till the twenty-third, when it ceased altogether. On the twenty-fourth the right knee-joint became swollen and tender, and the ankle shortly after. Effusion was present next day in the knee-joint, and the left knee became similarly affected. By the twenty-ninth day she was sinking, and on the thirtieth day she died.

Remarks.—No evidence of any disease of internal organ occurred throughout.

The following cases occurred within a twelvemonth in a limited locality extraordinarily affected by scarlatina for that period, so much so that I was informed that one medical man had seen fifty cases a day in it. Only two of the following cases were attended by the same medical man. The locality was a suburban park, thickly covered by houses varying in rent from £10 to £80 a year, situated on a level ground, and low lying.

Case a.—*Diphtheria ; death.* (Class 3, Case 5.)

Mrs. A—, primipara. Easy delivery; went on tolerably well for two weeks, when she was attacked by the symptoms of adynamic puerperal fever. When I saw her I found purpura and petechiæ well marked; yellow skin; a very marked diphtheritic state of vagina; bloody state of urine; tongue brown; pulse rapid, and very feeble; and partial delirium. In this state she lasted for two days, and then died.

Remarks.—Her medical man had not been near a case of scarlatina nor fever lately. The last case of this series died three or four doors off this house, about a year after.

Case B.—*Puerperal fever, &c.; death.* (Group II B, Case 16.)

Mrs. D—, in fourth confinement. Had a rapid labour, and apparently doing well up to the third day, on which she was attacked by rigors, succeeded by pyrexia and diarrhœa; this continued two days, when typhoid symptoms set in, with swelling of the joints; delirium; and the pulse 130 per minute; there was also much tympanitis. She rapidly sank, dying on the fifth day after confinement, and on the third of attack. No rash was observable in this case.

Remarks.—This patient lived two or three doors off from the next patient, their deaths occurring within two weeks of each other, but not attended by the same medical man.

Case C.—*Puerperal fever; death. Attended by a medical man who had other cases with scarlet fever.* (Group I, Class 1 B, Case 13.)

Mrs. ——, in fourth confinement. Was taken on the fifth day with severe rigors, followed by sharp reaction, with slight diarrhœa and delirium; gradually the symptoms became more typhoid. I found her on the eighth day wandering in mind; pulse 130 per minute; picking at clothes, but was taking nourishment pretty well. The lochia had ceased after the third day, but there was no offensive discharge from vagina. No milk was secreted, nor was any rash observable. She sank on the ninth day; the fourth of the attack.

Remarks.—Her medical man had been attending a good deal of scarlet fever at the time. He informed me that two patients he afterwards attended in their labour had scarlet fever after, but in one of these the complaint was already in the house.

Case D.—*Scarlet fever; death.* (Group I, Class 1 A, Case 18.)

Mrs. S—, attended by the same medical man as was Case C, about four or five months after. She had been frequently in a house

where scarlet fever was. She had an easy labour, but rather lingering, and went on well for three days, when sore throat and scarlatina rash came on, with the usual symptoms. On the sixth day the pulse was 130, skin red all over. There was neither milk nor lochia. She went on with much the same symptoms, but becoming lower daily, till she died in a typhoid state the tenth day after delivery.

CASE E.—*Puerperal fever; death. Had been exposed to scarlet fever.* (Group 1, Class 1 B, Case 14.)

Mrs. ——, multipara. Had gone on pretty well for two weeks after labour, when she was taken with slight pyrexia which after a few days increased. I saw her then, but although they pointed to some toxæmia, there was nothing very marked in her symptoms. The mind was a little unstable, the pulse quick. However, by the end of a week more she died, the case becoming more clearly one of pyæmia.

Remarks.—Had been visited by a friend from a scarlet fever house at time of delivery.

CASE F.—*Puerperal fever; putrid child; death.* (Group 2 B, Case 17.)

Mrs. M—, primipara. Was very long in labour, altogether three days, from rigid os uteri. The child was dead and decomposed, putrid gas escaping with the fœtus and placenta. About the third day began to vomit, had rapid pulse, hot skin without delirium. The fourth day she had slightly improved, but on the fifth the symptoms returned with greater severity, the vomiting being very trying to her. The pulse then was 120 per minute, small and variable; hot skin, flushed face, glazed tongue, without diarrhœa, no rash observable. The urine free. She again made a slight improvement, but again became worse, incessantly vomiting, and died on the seventh day after delivery, and on the fourth of attack.

Remarks.—This patient resided close to the house in which Case A occurred. The medical attendant had not been attending contagious cases for some time before.

CASE G.—*Puerperal fever; scarlet fever in child; death.* (Group 1, Class 1 B, Case 15.)

Mrs. H—, was delivered of her second child naturally, and went on well till the fourth day, when she became suddenly feverish and

excited, the milk receded, lochia stopped about the sixth day. The urgent symptoms receded for two or three days when she could sit up in bed. On the tenth day, however, she became very low, with rapid pulse, 150 per minute; dry tongue; picking at the clothes, &c. She had no sore throat, nor any eruption perceptible throughout, when I saw her on that day. The joints were free from swelling, but complained of general pain when moved. She was sweating freely. Next day, under stimulants she rallied considerably, but on the following (the twelfth) she died.

Remarks.—On the third or fourth day after the attack began, her elder child was attacked with scarlet fever, but had it lightly.

GROUP II A.

Case 1.—*Feverishness from actual labour; death.*

Mrs. ——, æt. 30, of excitable temperament, has three children. She had a quick, easy labour, but the pulse was 120 per minute from the beginning, and so continued, coupled with a febrile state. About the third day she was much excited by the nurse becoming drunk, which increased the symptoms already present. The bowels became irritable, without nausea. On the eighth day after confinement I saw her and found the tongue dry and brown, no nausea nor diarrhœa; pulse 120, weak and small; she was quite coherent, but nervous and tremulous in her manner. Sweats were severe. No pain in abdomen nor in limbs. Urine free without albumen. She expressed herself as feeling much better than she was. The symptoms, however, continued and she died comatose at the end of the tenth day.

Case 2.—*Sudden feverishness six hours after delivery; urine albuminous; death thirty-six hours after labour.*

Mrs. M—, æt. 40, stout woman with five children, was delivered easily, being perfectly well up to the time of labour. Six hours after was attacked by shivering, succeeded rapidly by feverishness. Pulse 120, cough, delirium gradually subsiding into unconsciousness. I saw her in twenty-six hours after first attack, she was then scarcely sufficiently conscious to swallow. Tongue brown, loaded, dry in the centre; skin hot, sweating; face suffused; pulse weak at 160 per

minute. Urine partly passed, but drew off one pint, which was high coloured and albuminous. She remained unconscious, gradually sinking, till thirty-six hours after first attack, when she died. No rash on skin.

Case 3.—*Puerperal fever; symptoms arising from labour; death.*

Mrs. B—, primipara, æt. 32. Natural labour, but tedious. From the time of delivery the pulse was quick, and particular apathy with regard to the child. There was also feverishness from the first. The lochia were natural till the third day, when they became nearly colourless. At same time the pulse rose to 100. Tongue furred, sweating profuse, but appetite was fair, the bowels quiet and urine plentiful but high-coloured. She remained in about the same state till the sixth day, when I saw her. Pulse then was 120 per minute, compressible. Lochia watery and profuse; sweatings free; mind wandering. She was very feeble, so that she could hardly talk; tongue furred; bowels quiet; took broths and egg with brandy readily. Had a slight teasing cough. There was no pain in joints nor anywhere in abdomen; but she complained of pain in the left labium, where I found an unhealthy excoriation. The seventh day she was lower, and symptoms rapidly becoming more typhoid; with rapid breathing, pulse 130. Urine not secreted; and on the eighth day she died insensible. The urine was not albuminous, at least, on the sixth day.

Remarks.—There was *no evidence* of infection from any outward source.

GROUP II B.

Case 1.—*Puerperal fever; fatty heart* (?); *death forty-eight hours after delivery.*

Mrs. A—, æt. 35, stout anæmic woman, in her second confinement. She was delivered naturally, except that the placenta required manual removal. Some little loss ensued, but nothing at all serious. She went on well for twenty-four hours, when the pulse rose, coupled with pain in lower abdomen. Warm applications relieved the pain, but the pulse shortly became 150 per minute, and very feeble. After eight hours a severe rigor came on. As she was recovering from this I saw her. Reaction was marked, with perspiration and pulse 120 per minute. There was a slight tremor of manner, but no delirium.

Lochia natural. I could find nothing abnormal about uterus nor in abdomen. She rapidly became worse, and sank forty-eight hours after delivery. No necropsy.

Remarks.—There was no sign of internal hæmorrhage of any kind. She was supposed to have a fatty heart, being very stout, and being almost unable to walk, especially upstairs, from breathlessness for years past. The child died a month after from marasmus. There was no evidence of any fever having been given to her.

Case 2.—*Pyrexia; cellulitis; death.*

Mrs. C—, in her tenth confinement. Had some pain in left groin before labour. This increased after with tenderness on deep pressure. She became feverish, and these symptoms increasing, I was asked to see her. I found the pulse at 130 per minute, feeble and small. Tongue moist and very coated; there was much thirst. Skin moist at times, but not very hot. She had a short cough, but no particular change in the lungs was noticed upon auscultation. She had had insomnia, but this had yielded to an opiate. On examination per vaginam there was found a swelling attached to left pelvic walls, and also in the broad ligament, pressure upon which gives pain. Uterus not enlarged. She became worse rapidly, and died on the ninth day after labour in a typhoid state.

Case 3.—*Puerperal fever; death.*

Mrs. A—, æt. 33, in her eighth confinement, which was natural and rapid. Went on well till third day, when she was seized with diarrhœa, vomiting, quick pulse, and thirst; furred tongue; slight cough. The diarrhœa was checked readily, and for three days she seemed to improve, but on the fifth day of the attack was taken with severe rigors. The milk had gone away by this time. The lochia were not scanty; on the sixth day they were free. On the sixth day of the attack the child had a convulsion, which much excited her, and increased the former symptoms, I then saw her, and found her partially incoherent, with all the symptoms of a low typhoid state. Abdomen tympanitic but not tender; slight vomiting. No rash was visible. These symptoms gradually increased, with occasional diarrhœa, till she died, on the twelfth day after the commencement of the attack.

Remarks.—I found the urine on the only occasion I obtained it laden with albumen. There was no pain in the joints.

Case 4.—*Arthritic pyæmia; death.*

M. A—, single, was delivered of twins with large placenta. The labour was inactive throughout, and she was mentally very depressed in consequence of her situation. For about three days she went on well, when the lochia ceased and milk also, coupled by pyrexia and sweating. She had vague pains in her shoulder, knee, and wrists. The pulse was very rapid. She had taken plenty of nourishment, even a chop on the sixth day. She had no diarrhœa nor vomiting. I saw her on the seventh day. She had a pale, haggard countenance, flush on cheek, tongue dry and brown, sordes on teeth; skin hot and dry; abdomen tympanitic; very slight tenderness over uterus. Lochia had slightly returned. Pulse feeble, 140 per minute. She sank next day.

The knee- and ankle-joints were red and swollen.

Case 5.—*Puerperal peritonitis; death.*

Mrs. M—, æt. 40, in her eleventh confinement. She had till this one always quick labours, but was apparently in good health. This labour was lingering, but natural. On the third day she was taken with severe pyrexia, preceded by pain in right groin. This extended quickly over the whole abdomen. Vomiting, tympanitis, rapid pulse, and sweatings, succeeded. I saw her on the fifth day after confinement and found her sinking, pulse being 150 per minute, with dyspnœa and faintness. There was severe pain in abdomen, which was tight and fixed; the face was pale and hands cool. The bowels had not been open since confinement. She died a few hours after. I could hear of no source of any contagious origin.

Case 6.—*Puerperal fever; death.*

Mrs. H—, primipara, æt. 30. Hard labour, with face presentation, terminated naturally. She went on for five days well, excepting with retention of urine. On the sixth day she became very low and desponding. Pulse feeble, 120 per minute; urine plentiful. On the seventh day she complained of some pain in lower abdomen. There was much tympanitis. The lochia continued natural. There was no evidence of any cellulitis. Tongue slightly furred, moist and pale; pulse 130 per minute, variable; no vomiting nor diarrhœa; somewhat

wandering in mind and depressed. She gradually became lower, and sank on the eighth or ninth day after delivery.

Case 7.—*Puerperal fever; death.*

Mrs. ——, æt. 35, five children. Had an easy labour, and natural. Taken on third day with diarrhœa and abdominal pain, with tympanitis, shivering, succeeded by feverishness; slight delirium; cessation of milk and lochia; pulse 120 per minute. She had also much vomiting. Upon the sixth day I saw her. The pulse was the same, she was profusely sweating, and the tympanitis was great; tongue dry in centre. All the symptoms remained, with some variation, and, indeed, apparent improvement up to twelve hours of her death, which took place eight days after delivery.

Case 8.—*Puerperal fever; recovery.*

Mrs. G—, multipara. Had had a natural delivery; went on well for three days, when severe vomiting occurred, succeeded by much prostration; the pulse rose to 130 per minute; no tenderness in abdomen nor pelvis; no diarrhœa, but nausea; tongue was clean. For a week these symptoms continued, the sickness being intermittent; but gradually tympanitis occurred, without any pain in the uterine region; the lochia were natural, not offensive; the epigastrium became tender from the frequent vomiting; the colon was distended with flatus. She had much thirst; tongue moist, but reddish; slight tendency to diarrhœa. She had had no sleep since the first attack, but was quite sensible. The skin was cool, without sweats; the pulse was quicker than natural. This condition subsided from this time, and recovery was complete in about four weeks more.

Case 9.—*Pyæmia after abortion; death.*

Mrs. ——, primipara, aborted at the third month. About the end of a week I found her suffering from pyæmia, with a pulse of 130. She died within eighteen hours after my visit. She had eaten heartily of a chop just before my visit notwithstanding her general state.

Remarks.—I have no record of her surroundings, nor as to whether she had offensive discharges after aborting.

Case 10.—*Pyrexia twelve hours after delivery; rash; recovery.*

Mrs. ——, primipara; after a fair delivery was attacked with pyrexia; delirium; rapid pulse; furred tongue. She had a mottled state of skin, which was scarcely to be called a rash, still a quite unusual appearance. There was no albumen, and these symptoms continued a few days and then gradually subsided, ending in recovery.

Remarks.—I could find nothing in her surroundings to explain the attack.

Case 11.—*Pyrexia; recovery.*

Mrs. D—, æt. 38, fifth labour. The labour was easy. She went on well till the fifth day, when she was seized with rigors, which were succeeded by fever, quick pulse, 120 per minute, sleeplessness, scanty high coloured urine, and furred tongue. Neither vomiting nor diarrhœa had occurred. This continued for a few days when I saw her. There was much prostration, with some hysteria; the skin was sweaty, not burning, and there was some slight tenderness on lower abdomen. The lochia were very pale, and milk was secreted in moderate amount. There was no pain in the joints. With gentle support, cinchona, and ammonia, &c., this patient recovered in a short time.

Case 12.—*Pyrexia, cellulitis, &c.; recovery.*

Mrs. S—, æt. 21, primipara. Had a very hard and tedious labour. On the third day suffered from feverishness. The uterus was twice the normal size at that period; lochia colourless; irritable bladder; pulse 120. Tongue furred; thirst; no appetite; face pale; much tenderness over lower abdomen. These symptoms gradually abated, but a swelling on left side of the uterus was felt one inch above brim. The feverish symptoms continued for nine days, when they went off and the swelling subsided.

Case 13.—*Pyrexia, cellulitis; recovery.*

Mrs. —, in third delivery, which was tedious, but natural otherwise. A few days after became feverish with severe pain in abdomen, prin-

cipally on left side, where pain had been experienced prior to labour. The lochia were suppressed. The more severe symptoms of fever subsided by the end of the second week, but for three weeks she had retention of urine and incontinence of fæces. At the end of the second week a troublesome cough appeared, with short breath. The uterus was found to be tender, having a hard swelling on left side attached to it, and fixing it somewhat to the pelvis. There was a yellow vaginal discharge.

Remarks.—It should be added that all the children had been subject to a congenital syphilis. Of the sequel of this case I have no notes, but I think she recovered ultimately.

Case 14.—*Pain in abdomen five days after delivery; sudden collapse; death.*

Mrs. ——, had been delivered four days, when after going on well a little feverishness came on with slight pain in groin. A slight purgative was given. After the action she complained of sudden faintness and coldness, and the pain in groin increased much. I saw her shortly after and found her extremities cold; pulse quick; tongue dry and brown; anxious expression, and very nervous. Pressure in groin gave much pain. She was improving for six hours under gentler stimulants, when the nurse took her out of bed and fatal syncope succeeded immediately.

Case 15.—*Metritis, cellulitis, or hæmatoma; rupture into peritoneal cavity* (?); *death.*

Mrs. ——, æt. 21, primipara. Nervous, fragile looking woman. When I saw her she had been delivered three weeks. The labour was very tedious, but she had gone on well till the fourth day, except that the pulse was quick from the labour. The symptoms of feverishness supervened slowly, the pulse gradually rising to 120 per minute. The lochia were suppressed; the milk was not secreted; the bowels were irritable, with occasionally vomiting, and much nausea. The tongue was dry in centre for a week. At one time she improved, but a few days before I saw her she suddenly relapsed. There had also been noticed a bulky uterus, with swelling around. When I saw her I found her with cold clammy hands; pulse 160; tongue red and dry; vomiting constant; tenderness in abdomen for the first time to-day. The uterus was three times its

normal size with swelling around and indistinct fluctuation. There was no cough. She died thirty-six hours after my visit.

Cases 16 and 17.—See Cases B and F, at pp. 104-5.

Case 18.—*Puerperal fever.*

Mrs. ——, æt. 35, primipara. Was delivered naturally after a moderately long labour. She went on well for four or five days, when she began to be feverish, the pulse rising rapidly. Delirium came on next day, with passage of excreta involuntarily. The tongue covered with a dry brown fur; much thirst; pulse 120. I saw her about forty-eight hours after these symptoms came on. The pulse was 130 per minute, and weak. The skin not particularly warm; face pale; tongue dry and brown; some slight tenderness over uterus; excreta passing involuntarily; much thirst, and a feeling of requiring food. There was a slight measle-like rash on the upper chest, but below there was none. The throat was injected something like that of mild scarlet fever, but neither it nor the rash was sufficiently distinct to call by any precise name. She gradually became lower and sank with typhoid symptoms a week after delivery.

Remarks.—I could find no account of contagion here. The nurse was a most inefficient person. Any history I could not obtain.

The discussion on Dr. J. Braxton Hicks' paper was adjourned until the next meeting.

MARCH 2ND, 1870.

Dr. GRAILY HEWITT, President, in the Chair.

Present—39 Fellows and 10 visitors.

Dr. Arthur Farre and Dr. Charles West were elected Honorary Fellows of the Society.

Dr. Randle Buck, Inkberrow, Worcestershire; Mr. F. C. Dodsworth, Jun.; Dr. Maurice Evans, Narberth; Dr. J. M. Fisher; Mr. W. Jones, Neath; Mr. E. Reynolds Ray, Dulwich; Dr. H. P. Scott, Croydon; and Dr. J. Whitehead, were elected Fellows of the Society.

Dr. JAMES OSWALD exhibited a specimen of Monstrosity, and gave the following particulars of the delivery.

On February 12th, 1870, I was requested to visit Mrs. L—, æt. 39, who was said to be in the ninth month of her eighth pregnancy. She was in bed, and complained of having had strong labour-pains for some considerable time. On placing my hand on the abdomen I concluded that I should have a case of twins. On making a vaginal examination I found the distended membranes protruding through the vulva; I ruptured them, when nearly a large pailful of fluid escaped, besides what was soaked up in the bedclothes. On further examination I could with difficulty make out the presenting part, but after a little time I felt the left hand and arm coming down, then I could trace the back; the arm was turned completely backwards. The os being well dilated, I resolved to turn, and after bringing down the feet

I found that the body did not make any descent. I then, with much difficulty, felt the head, and found that it was firmly adherent to the posterior wall of the uterus. I broke down the adhesions carefully, and quickly afterwards my patient was delivered of a female monster, stillborn. The placenta, likewise adherent, was brought away in about a quarter of an hour. There was no hæmorrhage; the uterus contracted firmly, and my patient has made a good recovery. She has previously had two stillborn children at the full time, and her last child (now living) was born five years ago. She cannot recollect having had any fright. During the earlier part of this pregnancy she partially lost the use of both legs, which power was restored towards the latter month. She has otherwise enjoyed good health.

Dr. Heywood Smith exhibited a malformed heart. He had removed it that afternoon from an infant aged seven days. There was practically but one ventricle, a rudimentary septum extending from above downwards for scarcely one quarter of its depth. There was also only one auricle. He remarked on the comparative rarity of this particular malformation, and considering it an interesting specimen, had refrained from any further hurried examination, as he thought it might be the wish of the Society to have it more carefully dissected.

The President, in thanking Dr. Heywood Smith for bringing forward this case, requested him to be good enough to make a careful dissection of the preparation and to report thereon to the Society.

Dr. Playfair showed a specimen of carcinoma of the body of the uterus from a patient who had been under the care of Dr. Priestley, in King's College Hospital. The prominent symptoms had been profuse and irregular hæmorrhages, alternating with abundant watery discharges of an intense fœtor. The uterus was freely movable, and the cervix apparently healthy. Death took place with symptoms of sudden collapse. On post-mortem examination it was found

that perforation of the anterior wall of the uterus had taken place, a ragged aperture about the size of a shilling existing in front of the right Fallopian tube.

Dr. Playfair also exhibited for Mr. Matthews, the surgical instrument maker, of Portugal Street, a guarded perforator invented by him. It consisted of an ordinary perforator, with a sliding metal guard, which could be pushed up and down, so as to protect the vagina from the cutting edge of the perforator during insertion. Mr. Matthews has presented a specimen of his instrument to the Museum of the Society.

ON THE CHLORAL TREATMENT OF ECLAMPSIA.

By Baron P. von Seydewitz, M.D.

I propose to communicate to the Fellows of our Society two cases of eclampsia in which the administration of chloral proved successful.

I shall, however, not enter into any protracted discussion about the real value of a remedy which lately has attracted so much attention as a hypnotic, an anæsthetic, an internal and hypodermic therapeutical agent.

I suppose that all are acquainted with its recent and small literature. I will only say that, although since the appearance of Oscar Liebreich's pamphlet chloral has been frequently used, especially abroad, too little is yet known about its action to come to a final conclusion as to its therapeutic efficiency as a standard remedy.

Chloral seems to act throughout in a more certain and accelerated manner than opium and its salts. It neither causes excitement nor produces subsequent gastricism, and on this account is preferable to morphia, which only too often has to be abandoned on account of the gastric disturbances it causes.

Chloral, as is well known, is recommended in all cases of

inflammatory affections where narcotism is indicated. Thus, it promises to do good service in acute rheumatism of the joints, neuralgia, tic douloureux, ischias, nervous gastralgia and enteralgia, tussis convulsiva, laryngismus, singultus, nervous asthma, tetanus, trismus, and above all in tabes dorsalis, where often full doses of opium and its salts prove powerless.

It must, however, be mentioned that Benedict, of Vienna, cautions against full doses of chloral in brain diseases. In his opinion they might possibly lead to congestion and subsequent hæmorrhage into the brain.

Liebreich, on the contrary, makes no restriction in this respect, and as he has had ample opportunity, as Virchow's assistant, of investigating the subject, and has been besides allowed to experiment upon the patients of the Berlin Charité Hospital, in the wards of Virchow, Bardeleben, Langenbeck, Westphal and Joseph Meyer, his observations on so large a scale ought not to be undervalued. He does not hesitate to administer chloral even to new-born children at the dose of 0·04 gramme, *i. e.* three quarters of a grain of English weight. According to him the internal use of chloral is counter-indicated in all defects of the mucous membrane and in ulcerated surfaces of the intestinal tract. In these cases he recommends the subcutaneous injections instead.

Lewinstein advises chloral treatment in cases of severe dyspnœa produced by affections of the heart and lungs. The contra-indications, he admits, are gastric disturbances and ulcerative processes of the fauces, the œsophagus, the stomach, and the back wall of the larynx.

Bouchut, on the contrary, sees contra-indications only in cardiac and cerebral diseases. Other authors hold different views. This has frequently been the case when a new therapeutical agent, especially of some importance, has appeared on the medical horizon. Of course, we do not know yet what will be the fate of the hydrate of chloral, but should it always prove so efficacious in the treatment of eclampsia as in the following two cases, it will doubtless become a standard remedy.

In obstetrical cases, too, its administration might become valuable, as its innocuousness when used with discretion seems already to be beyond dispute.

I will just mention that for the particulars of the following cases I am indebted to Professor Liebermeister's first assistant, Dr. Rudolf Massini, of the Bürger Hospital at Bâle, in Switzerland. The first case was partly watched by myself, when, on my return from the International Congress at Florence, in October last, I stayed for about a month at Bâle, previous to my return to England.

Margaret M—, 35 years of age, a factory woman, born in the Canton Bâle and living at Birsfelde, was admitted into the Bürger Hospital on November 5th, 1869, and discharged cured on December 27th of the same year. Diseases —pericarditis and endocarditis in puerperio; epilepsia.

Previous history.—Patient had been generally in the enjoyment of good health. Eleven years ago she contracted typhoid fever and a year afterwards married. She is the mother of seven children, the youngest being a fortnight old. During pregnancy she suffered from swollen feet (varicose veins), and therefore ceased to work in the factory during the last ten weeks, but attended to her household duties instead. The labour was spontaneous, but difficult, on account of the size of the child, and great loss of blood occurred. Patient suckled her child a few days only, and was then obliged to discontinue on account of weakness. She had left her bed on the third day after confinement, which, however, she was obliged to resume a week afterwards, when her feet were much swollen. Violent pains in the chest were felt, accompanied by dyspnœa. There was also inclination to cough, but no expectoration, and herpes on the lips, whilst there was, and is still, much lochial discharge.

Appetite moderate; bowels regular. Ever since the attack of typhoid fever, eleven years ago, patient has suffered from epileptic fits, occurring at irregular intervals, generally every four to six weeks. During pregnancy no fit.

Present state. — Patient is moderately well nourished.

Pulse 120, small, irregular; face swollen, livid, œdematous; slight œdema on the hands, rather much on feet and legs; the remains of herpes on the upper lip; goitre much developed; tongue pale, somewhat swollen and much furred. Cardiac dulness, beginning on the fourth rib, extends to the middle of the sternum; apex beat in the fifth intercostal space, farther outwards from the mammillary line. There is a loud, rough, presystolic murmur, followed immediately by a first sound; second sound weaker than the first. Over the right heart two distinct sounds. Second pulmonal sound not increased. Over the aorta two dull sounds. Abdomen distended with moderate free ascites. In front over the lungs on both sides sonorous râles and vesicular breathing. Liver from the fifth rib does not extend below the costal margin. Behind, to the left, beneath the angulus scapulæ, dulness, undefined breathing, with dry gentle blowing rhonchi, increased vocal fremitus, otherwise vesicular breathing.

From her admission up to December 8th the treatment was chiefly directed to the state of the chest and dependent symptoms. On that day an epileptic fit occurred, in which she bit her lip; five minutes afterwards intellect tolerably clear; breath still somewhat stertorous. Half an hour later patient sits up, apparently well, doing some light needlework.

13th.—Until to-day no more epileptic fits since the 8th. Last night, however, at midnight, when patient returned from the closet, an epileptic fit occurred and was followed by sopor. When hardly awake from the latter, second fit, violent clonic cramps, shaking the bed, afterwards rattling in the throat. Breath and sensorium disturbed. Pupils dilated, but contracting slightly upon irritation through light. Pulse 132, very small during the fit, afterwards stronger. Skin covered with perspiration; rather much coughing and dyspnœa. Ordered at 2 o'clock a.m. ice-bags and sinapism ad nucham.

4 o'clock in the morning,			3rd epileptic fit.	
5	,,	,,	4th	,,
5½	,,	,,	5th	,,
6	,,	,,	6th	,,

Patient has not regained consciousness. Before the fourth fit violent vomiting. Pupils of middling size and good reaction. Tongue hanging right out of the mouth, with a small wound on the right from biting. Stertorous breathing, tracheal rattling; in front, on the right, humid, sibilant, sounding rhonchi. Much nausea. Carotids pulsating strongly. Shortly before 9 o'clock in the morning, seventh attack, lasting thirty seconds, with temporary dilatation of the pupils, much cyanosis, first tonic cramps lasting about ten seconds, then clonic ones, with much foam from the mouth, gnashing of teeth, &c. Immediately after the fit the pulse was 144. At 10 o'clock in the morning eighth attack. Afterwards loud tracheal rattling. Consciousness quite gone. Pulse 160. Bloody foam between the lips. Strabismus divergens (at this moment the first dose of chloral was administered, as we shall see directly). About noon the respiration began to become a little freer. Tracheal rattling decreased. Pulse 132. Strabismus ceased. Intellect somewhat clearer. At 3 o'clock in the afternoon the tracheal rattling disappeared still more. Intellect clear. Great oppression over the chest. Pulse 132, very small. On the right, in front, relative dulness, undefined, breathing with sibilant rhonchi. At 4 o'clock in the afternoon hands cool; pulse 132, very small; frequent respiration, cadaverous smell. Face waxlike. Since 10 o'clock a.m. no more fits, *i. e.* exactly since the administration of chloral. At 6 o'clock p.m. pulse 120, small, but a little more distinct. Intellect quite clear. Tongue painful from the bites. Perspiration. At 9.30 p.m. pulse 108. Incontinence of urine. Temperature in the morning 37°, in the evening 38°, Centigrade.

The treatment was as follows:—

At 4 o'clock in the morning, when the third fit occurred, the sinapism ad nucham was repeated, and at the same time a subcutanous injection of twelve milligrammes of digitalin, made likewise ad nucham. At 7 o'clock a.m. patient was brought into a warm bath, where she remained for half an hour, and half an hour afterwards, *i. e.* at 8 o'clock in the morning, four leeches were put behind the ears. At 11 o'clock a.m.,

and from that time to half-past twelve, a table-spoonful of a solution of half a drachm of hydrate of chloral into two ounces of distilled water was given every twenty minutes, and the same prescription was repeated at half-past nine in the evening to prevent any new fit during night. This calculation proved correct, for the patient slept well all night.

14th.—Pulse 96. Urine collected, 1 pint, showing traces of albumen. Patient states that she has always had her fits in intervals of five to six weeks, and always only one fit at the time.

15th.—Slept during the night. In the morning much perspiration. She feels still weak. Pulse 108. Complains of humming in the ears. Urine free from albumen. Dulness on the right in front disappearing, on the same place vesicular breathing is again to be heard. Pulse in the evening 100. Morning temperature 37·3°, in the evening 37·7°.

16th.—Pulse 84. Bowels constipated. Fresh crop of herpes on the upper lip. Skin covered with perspiration. Morning temperature 36·1°, evening 37·6°

19th.—Patient now rises. She is free from fever, but the state of her heart remains unchanged. However, she recovers more and more and feels quite well. The affection of the heart gives her no trouble.

27th.—Patient leaves the hospital to-day, and is in pretty good health. Cardiac dulness from the upper border of the fourth rib extends as far as the right sternal border. Apex beat pretty strong in the fifth intercostal space in the mammillary line. Here, as well as over the right heart, a systolic murmur is heard. Second pulmonal sound strong. No œdema, no more ascites.

Up to the 1st of February, 1870, no fit occurred.

The second case was that of a boy, æt. 12, who suffered from morbus cordis and Bright's disease, and in whom also uræmic convulsions were decidedly relieved by chloral.

Mr. Spencer Wells hoped that when chloral was given its effects on the temperature of the body would be noted. He had seen it fall from 104° to 99° after four twenty-grain doses, given at intervals of two hours. In a case of furious maniacal excitement he had seen last week with Dr. Morris one thirty-grain dose was followed by almost immediate calm, and afterwards by sleep.

Dr. Playfair related the particulars of a case of threatened puerperal mania in which the chloral had proved of great service. The patient had become maniacal after a previous labour. A week after her present confinement the same symptoms which had preceded her former attack showed themselves, viz. great restlessness and excitability, with inability to sleep. A thirty-grain dose of chloral at bedtime gave her a long quiet sleep, and next morning she was quite calm. The same dose was repeated every night for a week, and she made a perfect recovery. He had no doubt that by this means the threatened attack had been averted.

Dr. Rogers said he believed that chloral would be found to be more extensively applicable to the treatment of a greater variety of diseases than at present contemplated. The recovery of the two cases narrated by the author of the paper just read gives evidence of its curative properties. Dr. Rogers had principally used it as a hypnotic and anodyne ; he had last evening prescribed it successfully for a child attacked with spasmodic twitchings of the left arm and leg, accompanied with pain, due, he believed, to irritation of the brain from disease of the right ear. It certainly often causes a feeling of nausea, and in one case, now under treatment, where its use has been continued for two months to procure sleep, almost invariably the first dose is rejected, but after waiting a few minutes a repetition of the dose is retained with beneficial results. With some a thirty-grain dose will take good effect, but in one case, when prescribed to allay the violent pain of gout and obtain sleep, 60, 100, and 120, were administered in vain, though sure of the purity of the drug. In this case, strangely, two grains of opium gave ease and sleep. Dr. Rogers had not tested whether it possessed the property of reducing morbid heat.

The discussion on Dr. Braxton Hicks' paper on Puerperal Diseases, which was adjourned from the last meeting, was then resumed by Dr. Wynn Williams, who, after compli-

menting the author on the great practical utility of the paper, went on to observe that few could for a moment doubt that the parturient female, if exposed to the influence of the scarlatina poison, might become affected with the disease, and if any one had hitherto doubted it the long array of cases adduced by the author of the paper must convince him that scarlatina does attack, and that not infrequently, the pregnant and lying-in female, and runs its usual course, modified and rendered probably more fatal by the then peculiar condition of the patient. Neither ought we to be surprised at the large number of mothers so affected when we remember how much they are of necessity exposed to the poison, owing to its great prevalence in young families. As to the second class of cases, he was somewhat sceptical as to the greater number of them being affected by the scarlet fever poison itself, there being no symptoms of poisoning by scarlatina, and the parties only having been exposed to its influence did not satisfy his mind that they imbibed the scarlatina poison *per se*. Now, it is well known that during the prevalence of scarlatina the atmosphere is not only impregnated with impure air, but also with the toxic or septic emanations from the putrid throats of the patients, it may be in the form of vibrios with the septic poison attached. Should these emanations be brought in contact with the discharges of the parturient female they would act as a kind of ferment, and speedily cause these discharges to become putrid also; thus the patient would become affected, not with scarlatina, but septicæmia. It certainly would be instructive to know how many, if any, of the second and third series enumerated in the paper were free from putrid discharges from the vagina. He feared very few, especially of those in which death occurred. To prove that a patient may be attacked with puerperal septicæmia with scarlatina in the house, he related a case in point. Not very long ago he was called in to see a patient by a brother practitioner, affected with what is generally known as puerperal fever, but what he preferred calling puerperal septicæmia. It was the third day after confinement, and there was scarlet fever in the house, the disease thus

occurring exactly about the date dwelt upon by the author of the paper. When he visited the patient he found her suffering from the usual symptoms of puerperal septicæmia, having a very offensive discharge from the vagina. He immediately had recourse to the use of disinfectants; all the dangerous symptoms were at once removed, almost as if by magic, and she never had another bad symptom, scarlatina or otherwise, with the exception of two secondary abscesses occurring some weeks afterwards. No one will venture to assert that this patient was affected with scarlatina poison, as there would have been some other evidence of the disease which could not have been removed by the simple use of disinfectants. Now, the right understanding of the nature of these cases is of such vital importance in the treatment of the disease that, although the author of the paper has purposely omitted its consideration, none know its importance better than he does. The speaker hoped he may be excused just alluding to it. If a patient is suffering from offensive emanations from the vagina or uterus, she must be treated locally; the vagina and uterus, if necessary, must be washed out with a disinfecting fluid. For this purpose Dr. Braxton Hicks used Condy's Fluid, permanganate of potash; he (Dr. Williams) much preferred a solution of iodine, as by its volatility, rendered more so by the heat of the body, it was more likely to be brought in contact with any septic poison lurking, it might be, in the folds of mucous membrane. In the case just alluded to he of necessity used Condy's Fluid. Had he used a solution of iodine he did not believe the patient would have suffered from the secondary abscesses. The same observation would apply to the other classes—erysipelas, diphtheria, &c. That the parturient female, as well as the non-parturient, might be attacked with such diseases none could deny, but in the absence of any special symptoms indicating the nature of the disease he would be much more inclined to attribute the malady to the effects of the peculiar condition of the atmosphere, loaded, as it was known to be, with putrid or septic emanations, when epidemics of those diseases were rife. It might be in the recollection of the Fellows of this Society that a year or two ago

he read a paper on diphtheria, in which he attempted to show that the patients suffered more from the absorption of the putrid emanations of the fearfully offensive diphtheritic membrane than from the peculiar poison of the disease, and that by getting rid of the membrane the patient rapidly recovered. Bring any of these putrid emanations in contact with the discharges of the parturient female, and it would act as a ferment and produce septic poisoning.

Dr. Barnes was glad to see that Dr. Hicks had concentrated attention upon the causes of puerperal fever, postponing the question of treatment. Puerperal fever was preeminently a disease that called for the application of sanitary laws with a view to prevention. This disease still destroyed more lying-in women than any other—probably in England, certainly on the Continent, where it killed so many women in the lying-in hospitals. It was only by a careful study of causes that we could hope to achieve any great diminution of this mortality. The plan pursued by Dr. Hicks resembled that adopted by himself, of dividing puerperal fever into two great classes of autogenetic and heterogenetic. On being called to a case of fever in childbed we could only recognise at first the general condition—puerperal fever. Then came inquiry, and we might, by tracing the origin, obtain precise knowledge of its nature. His own experience entirely coincided with Dr. Hicks' as to the frequency of scarlatina amongst lying-in women. Being the most virulent, the most active of the zymotic poisons, it was the most frequent form of puerperal fever. It was propagated by foul linen, by sewage emanations, by direct connection. Dr. Hicks had noticed the frequency of puerperal fever in new houses. Dr. Barnes' former experience as a medical officer of health enabled him to explain this. Builders dug out the gravel, sold it, and filled in with the foulest putrefiable rubbish. This was a prolific source of fever. He had frequently been struck with the quick appearance of scarlatina after labour. Where fever broke out on the second or third day he had seen reason to infer that the poison was inoculated at the time of labour. But in many cases the mother was subject to the influence of the

poison before labour. During pregnancy, especially if she had had scarlatina before, she shared in the power, which we most of us had, of throwing off the poison. It was only when the excretory organs were overpowered by the double work of dealing with the waste products of gestation and the poison that the system broke down, and puerperal fever was produced. If he understood Dr. Williams rightly, Dr. Williams thought the scarlatinal poison entering the lying-in woman worked mischief, not as scarlatina, but as something else. Most certainly he had seen many conclusive proofs that the scarlatinal poison continued as such in the system of the woman, and was thence propagated to others. The woman received the poison, developed it herself, and communicated it to others. It was always scarlatina, modified in her by the puerperal state. The sore throat was often absent, the rash sometimes. The fact relied upon by Hugenberger, Spaeth and others, who observed that severe epidemics in lying-in hospitals were not coincident with unusual prevalence of zymotic diseases out of doors, did not justify the inference that zymotics were not the causes of puerperal fever in the hospitals. It was only necessary to introduce one dose of the poison from without. When one patient was attacked, the circumstances were so favorable that it rapidly spread. The lying-in hospital was a propagating-house for every form of puerperal fever. The forms chiefly prevalent in hospitals were scarlatinal, erysipelas, and hospital gangrene. Considering the vast predominance of heterogenetic puerperal fever, the question arose whether there existed an essential puerperal fever, arising strictly out of the puerperal state, that could give rise to an epidemic. This he was inclined to doubt. The autogenetic forms proper did not appear to possess active powers of propagation. For example, a common form, that which arose from decomposition of placenta setting up septicæmic fever, generally began and ended in the patient attacked. It was not very liable to spread to others. So with other varieties of autogenetic puerperal fever. Upon this subject he thought it interesting to recall that the injection of the uterus to purify from decomposing matter was

practised by Harvey. He relates a case in which he dilated the os uteri, threw in a large injection, bringing away a quantity of foul discharges, and curing his patient. But we were rarely in a position in practice to distinguish the contagious from the non-contagious forms. The proofs of contagion were but too common. There were the frequent series of cases in the practice of one man, whilst neighbouring practitioners were free; and he had had occasion to notice the sad fact that puerperal fever was unusually frequent amongst the wives of medical men.

Dr. Snow Beck was glad to see that great advance had taken place, since the former discussions, in the diagnosis of the diseases met with during the puerperal period. Some five years ago, when he related some cases with careful examinations, much discordant opinion prevailed, one being that the various epidemic diseases underwent, by some marvellous influence, an entire transformation, and were converted into a new and eminently contagious disease, called puerperal fever. It was not recognised that these epidemic diseases retained their specific characters, though the usual symptoms by which they were recognised might be somewhat masked, pursued their usual course, and were not infrequently propagated from individual to individual. And it was to these facts that the assumed epidemics of puerperal fever were due. He had long been convinced, as it had been stated, that there was no disease peculiar to the puerperal period which could be denominated puerperal fever. But there was another class of diseases which were not epidemic and not infectious, and which were most important to be recognised, as they were very fatal in their effects, yet remarkably amenable to treatment. These arose from injurious impregnation of the system by offensive or other discharges, and known as septicæmia. When the passages were injured by any means, no doubt inflammation, suppuration, sloughing, &c., might and did occur, and the system might be impregnated by these means. But the most serious mischief arose from the cavity of the uterus itself, and may be caused by the presence of coagula or portions of placenta, but this injurious impreg-

nation also arose, and not infrequently, without the presence of either of these. To allow of the formation of coagula or the retention of portion of the placenta the uterus must be imperfectly contracted, and this condition also allowed the large uterine sinuses to remain open and permit a ready absorption of offensive discharges. It was from this state that the most serious illnesses were to be attributed. And in these hitherto hopeless cases the treatment was now singularly efficacious, which consisted in washing out the uterine cavity and all the passages with disinfecting solutions and giving the various sulphites internally. It was, perhaps, yet to be determined what solution was the best—whether a weak solution of carbolic acid, permanganate of potash, sulphite of lime, tincture of iodine, or other agents. But it was a great step to know that this practice, which was at one time looked upon with so much apprehension, could be employed with little risk and was followed by such decidedly beneficial results. A similar practice was equally efficacious in arresting the progress of phlegmasia dolens, which in the majority of cases arose from coagulation of the blood in the veins from the absorptions of offensive discharges from the uterus. When these facts became more generally recognised the supposed injurious effects of lying-in hospitals, of overcrowding, &c., would cease to have much influence.

Dr. C. Taylor remarked that the analogy between the uterus after delivery and stumps after amputation was pointed out by the late Dr. Fergusson, of King's College, many years since; and admitting the frequency of scarlatina poison as a cause of fever in puerperal women, yet there were many other causes. It would be desirable to know if a previous attack of scarlatina rendered puerperal women less liable to an attack of puerperal fever, and if Dr. Hicks had any data, or if there were any data, in large lying-in hospitals, with regard to this suggestion.

Dr. Rogers thought very highly of Dr. Hicks's paper on "Puerperal Diseases," but could not agree with the opinion of the author, and some preceding speakers, that the term "puerperal fever" should be abolished, as under this head

were at present included specific contagious diseases, such as arose from scarlatina, erysipelas, typhus, &c. Dr. Rogers thought the term should be retained for those cases of septic poisoning arising from within from absorption of putrid discharges, or, too often, from without, the accoucheur having been recently handling morbid specimens, or having come from the dissecting room to deliver the patient, as used to occur in the Vienna and other lying-in hospitals. An excellent paper on this subject was read before the Medical and Chirurgical Society by his colleague Dr. Routh. The symptoms produced by such causes were markedly distinct from peritonitis. Would the term puerperal dyscrasia, used by Dr. Hicks, properly comprehend this form of disease? And what were the specific symptoms of that class which arose from the contagion of scarlatina, erysipelas, or typhus, when the distinctive characters of such diseases were not exhibited? Dr. Rogers wished also to ask Dr. Hicks what length of time the poison remained in the system of pregnant women incubating, so as to show itself after labour with, perhaps, a fatal effect? Might not the poison be introduced more directly than Dr. Hicks thought, by the accoucheur himself while attending the patient in labour?

The President concurred most fully in the views advocated in Dr. Hicks's paper, which was a most able and important contribution to the history of puerperal fever. His own experience had led him to regard this disease as one produced in several ways; properly speaking, it was not an affection of an essential and special nature, like measles or variola. He believed that the proportion of cases in which puerperal fever was the subject of self-poison was rather considerable, and, further, that in such cases the disease was not seldom communicated.

Dr. J. Braxton Hicks, in thanking the Society for the kind manner in which they had received his paper, said that it was intended as a contribution to our knowledge rather than as a complete paper. There were many blanks to fill up, which he hoped others would assist in filling in. One point in particular it was very important to gain information

upon, namely, how frequently the parturient woman was exposed to the various contagions, and how frequently she suffered in consequence. He thought a committee of the Society would much forward our knowledge here. In answer to Dr. Wynn Williams, he said that in the paper he had pointed out the various stages of the disease; that, first, we had to contend with the primary poison; then, if the patient lived, with the tendency to imperfect reparation of the parts concerned in labour, metritis, peritonitis, &c.; then with the secondary affections of pyæmia, embolism. In answer to Dr. Taylor, the reason why more lying-in women did not become affected, although medical men were much mixed up with scarlet fever, &c., he said that it was a certain fact that the patient was by this means affected, but the frequency of the occurrence was a point on which we wanted information. The care medical men took was some explanation, in not going straight from one to the other. The poison of scarlet fever was very readily dispersed, and the adult was generally protected by a former attack. In answer to Dr. Rogers, he had no facts by which to know how long a woman ran risks of contagion after it had ceased to appear in the house. He had seen many women sacrifice themselves by attending their children, some without warning of the danger, and many in spite of warning.

APRIL 6TH, 1870.

Dr. GRAILY HEWITT, President, in the Chair.

Present—41 Fellows and 4 visitors.

Books were presented from Dr. M. A. Patten, of St. Louis, Dr. P. S. Mootoosawmey, and Dr. C. J. B. Williams.

A guarded perforator was presented by Mr. Mathews, of Portugal Street.

The following gentlemen were elected Fellows of the Society:—Dr. F. P. Atkinson; Mr. J. Bately; Dr. D. E. Burdett; Dr. J. Butler; Dr. W. Saul; and Mr. Arthur Taylor.

Dr. MADGE exhibited a prolapsed portion of umbilical cord, showing in its course a large and complicated knot. When called to the patient the labour was nearly completed and pulsation in the cord had ceased. Dr. Madge doubted, even if there had been pulsation, whether with the presence of such a large knot it would have been prudent to follow the rule of trying to push the cord above the head. Under such circumstances hastening the delivery would be all that could be done. The child was stillborn, and had, to all appearances, died during labour from the pressure on the cord. The latter was more than twice the usual length (about four feet). Dr. Madge said he had no theory to offer as to the way in which these knots were formed, but he had no doubt that in the present case the knot was formed in utero, and that both

it and the prolapse were brought about by the extreme length of the cord.

Dr. Heywood Smith exhibited a cast from the head of a child that he had recently extracted by cephalotripsy. The mother's age was twenty-two; she was in labour with her first child, having had a miscarriage once. Labour had been going on for about sixty hours; the head was at the outlet, which measured three and a half inches in its antero-posterior diameter and two and a quarter inches between the tuberosities of the ischii. After the perforation of the head, from the commencement of applying the blades of the cephalotribe (Sir Jas. Simpson's) to the birth of the child, only five minutes elapsed.

Dr. Meadows exhibited two new forms of vaginal speculum, modifications of the one shown by him at the Society last year. One of these consisted merely of a broad posterior blade, with two narrow lateral blades, the latter, when closed, folding in upon the former, so that the instrument could be easily introduced, and when applied the two side blades are simultaneously expanded, so as to give a full view, not only of the cervix uteri, but also of the sides and anterior wall of the vagina. The other instrument contained no broad blade at all, but merely four small narrow blades, so arranged that when closed they all fall together in close apposition, and occupy so little space that the instrument can be introduced with the utmost ease. The four blades are expanded together, and thus a view is obtained of the entire vagina, anterior, posterior, and lateral walls, together with its contents, the cervix uteri, &c. Both instruments can be fixed at any degree of expansion, and may be opened to such an extent that almost any operation upon the cervix uteri or vagina can be performed through it, while, at the same time, its shape makes it perfectly self-supporting in the vagina, and thus obviates the necessity for at least one assistant in operations upon those parts.

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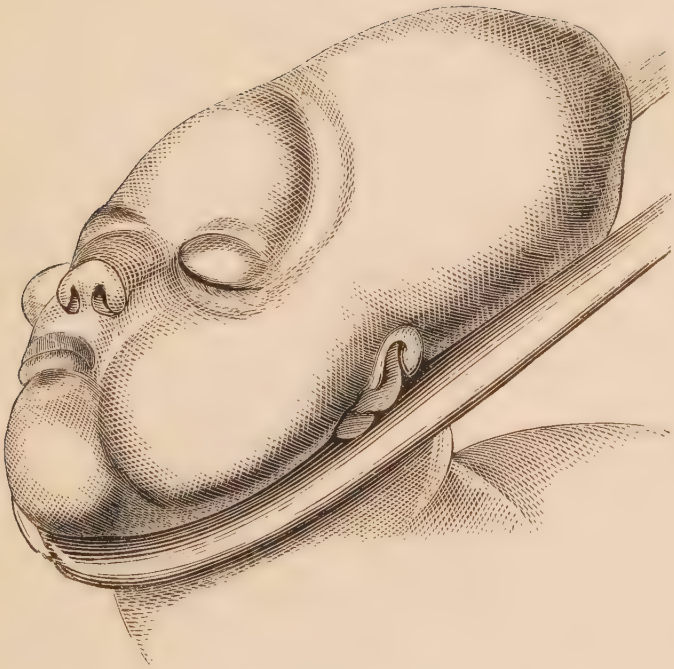


The President related the particulars of a case in University College Hospital, where a mass of hydatids had been expelled from the uterus of a married woman thirty-five years old. Upwards of a pint of mucous fluid, together with hydatids varying in size from a pea to a gooseberry, were suddenly passed. On examination the uterus was found enlarged to the size of the fist, and since admission into the hospital more hydatids had been evacuated. Microscopic examination by Dr. Legg revealed the characteristic echinococci heads. The President believed this was almost the first case where true hydatids had been proved to be expelled from the uterus.

REPORT ON THE CASE OF DR. GIBBONS,

WHERE, A GRAAFIAN FOLLICLE BEING FOUND ENLARGED, IT WAS TO BE DETERMINED WHETHER IT WAS A TRUE OR FALSE CORPUS LUTEUM.

The specimen had been in spirit four or five weeks. Uterus was of normal size, without signs of decidual formation. It appeared perfectly healthy.

The ovary was rather larger than usual, and generally red throughout. On the upper aspect was a protrusion containing a Graafian follicle, which had burst. The opening was not apparent. The follicle was about one third of an inch in diameter, hollow, lined by a thin, easily separable membrane, of red colour, apparently formed from fibrin tinged with blood. It was smooth, not corrugated. There was a very small sac formed in this membrane at one part, about one eighth of an inch diameter, slightly bulging into the cavity. The rest of ovary normal. As the uterus showed no sign of development, and as the effete Graafian follicle did not present any sign beyond that of ordinary involution in the non-pregnant state, we consider that there is no evidence from the specimen here referred to us that there had been any pregnancy at the time supposed, namely, within two months of death.

J. Braxton Hicks,
Henry M. Madge.

ON FUNDAL ENDOMETRITIS.

By C. H. F. Routh, M.D.,

SENIOR PHYSICIAN TO THE SAMARITAN FREE HOSPITAL FOR DISEASES OF WOMEN AND CHILDREN; CONSULTING PHYSICIAN FOR DISEASES OF WOMEN TO THE NORTH LONDON HOSPITAL FOR DISEASES OF THE CHEST; FELLOW OF UNIVERSITY COLLEGE, ETC.

It is not usual to find in our text-books a disease described by the above name. In most works on diseases of women it is included generically under the terms metritis, internal metritis, inflammation of the cervix or lining mucous membrane, but as a disease *per se*, and to which special symptoms belong, it has not been described.

Aran, it is true, hinted that the inflammations of the lining membrane might be very limited. Speaking of the anatomical changes which occur in internal chronic metritis, he adds, "These changes are due to a more *marked localisation* of inflammation of the uterine mucous membrane, either in a *part of the uterus* or in one or more of the elements of which it is composed" p. (428). But even here he is speaking generally of inflammation of the *body*. In the graphic accounts of Dr. Edward Tilt (founded, as they always are, upon cases, which make them the more valuable), the descriptions again have reference to the body of the uterus generally; the *fundus*, or any special part it may play in the phenomena displayed, is not recognised. Now, I wish it to be distinctly understood that I am not describing *internal metritis of the body* at all, but of the *fundus only* of the uterus; nor any of the varieties of internal metritis of the body, such as the *menorrhagic, purulent, exfoliative*, or *ulcerative* forms, nor even, indeed, of the chronic or acute, except so far as they involve the fundus, chiefly if not wholly, *per se*. I am quite aware, while I say this, that some of the symptoms I now refer to, and which I formerly described in my papers in the 'Association Journal' in 1862, have been ascribed by others to internal metritis of the *body*, but my endeavour will be to show that such symptoms especially

belong to inflammation of the fundus *per se*, and do not occur in simple internal metritis of the body of the uterus uncomplicated with fundal disease. That different opinions should prevail in the propriety of this distinction I am ready to admit; but if I herein make a distinction not recognised by some, I agree with the explanation given for this difference of opinion by Dr. Tilt. He himself states (p. 223, 3rd edition, of his work 'On Uterine and Ovarian Inflammation'), "On passing from the study of disease of the neck to that of disease of the body of the womb, it is obvious that we exchange the visible for the invisible, the distinctly tangible for the obscurely felt. The result is that the assertions of one talented observer are soon contradicted by another." *A fortiori*, does this apply to disease of the fundus.

It is a source of great satisfaction to me, however, to find that my views on the existence of *fundal* endometritis are endorsed fully by so acute and truthful an observer as Dr. Marion Sims in his 'Uterine Surgery' (p. 412), where, after kindly referring to me, he unmistakably describes one of its varieties. To give more precision to a disease which, I believe, admits of more exact diagnosis is the object of this paper.

At the commencement of last session of the Obstetrical Society three papers of considerable merit were the subject of discussion. One by Dr. Tilt, one by Dr. Hewitt, and the third by Dr. Meadows. The so-called irritable uterus of Gooch was the text, the former physician stating that such a disease, unaccompanied by other complications which would explain the symptoms, was not a pathological reality; Dr. Hewitt ascribing these symptoms to some variety of flexion; and Dr. Meadows to any uterine complication, flexion, congestion, or inflammation, which might coexist.

Let me now refer more exactly to these peculiar symptoms in question, which I will take the liberty to quote from Dr. Hewitt's paper (the words of Dr. Gooch.) "A young or middle-aged woman, somewhat reduced in flesh and health, almost living on her sofa for months, or even years,

from a constant pain in the uterus, which renders her unable to sit up and take exercise. The uterus on examination unchanged in structure, but exquisitely tender, even in the recumbent position always in pain, but subject to great aggravations more or less frequently."

Now, I believe the existence of flexion in all these cases is too general a conclusion. Dr. Gooch was undoubtedly wrong in some of these cases, when he assumed that the uterus was healthy in all the instances, and so far I think Dr. Hewitt is correct in asserting that, in the examination of the cervix, the other affected parts of the uterus were overlooked. But I believe that the true explanation of these cases is to be found in an inflamed condition of the fundus uteri, or, secondly, but more occasionally, of the ovary. Thirdly, in some of these cases there may be retroflexion, in others anteversion, which aggravate the affection, but it always primarily depends on one of the two other causes before named.

Fundal metritis or endometritis, for the disease is often confined to the fundus, is often the result of the use of internal uterine pessaries, of retained menstruation, and then is generally found in early youth, frequently the result of imprudent habits. It is also induced by retention of mucoid discharges within the internal cavity of the uterus (not the cervical), where the internal os is not sufficiently patent to give free exit to them.

The symptoms of this disease are exactly those quoted by Dr. Gooch, except that there is often some pain over both ovaries, in the mammæ, and down one or the other thigh, and this it is which, when aggravated, impedes more or less the power of walking. It is chiefly in these cases also that we notice the pain is in no way relieved by lying down, and that there is considerable sacralgia and pain opposite the lumbar regions, and even extending as high as the lower dorsal vertebræ. The abdomen is painful on touch just over the pubis. Indeed, pressure here will frequently make the patient sick. If the hand be passed behind and below the pubis, and then pressure made against the spine, there will be no pain. The cervix uteri examined by the speculum

may appear quite healthy; more often, however, there is some redness, if not ulceration, of the external os. Touched at this point it gives no pain, but directly the uterus is pressed upwards, or made to play rather harshly upon the finger, great pain is induced. If the posterior cul-de-sac be long, or the uterus retroflexed so that the fundus may be reached this way, there will be pain. More often, however, as the fundus is not reached, there will be no pain. Again, except in cases where the uterus is much anteverted, so that the finger impacts on the fundus through the bladder, there is no pain in passing the finger up the anterior cul-de-sac of the vagina. If the sound be passed per anum, or within the bladder, and then pressed against the fundus, great pain is induced. Passed, however, within the uterus, the evidence is unmistakable; the moment it has passed the internal os, and got beyond the cavity, great pain is felt, and if the sound be pressed at all forcibly against the fundus absolute agony may result, which may produce vomiting, an hysterical fit or faint, sometimes a regular epileptic fit. But short of this, the moment the sound reaches the fundus the patient commonly cries out "There, you have brought back all my pains," the analysis of these sensations in detail proving that you have brought about, only in an increased degree, the several pains in the same reflected localities to which the patient usually refers them when they come on normally in their worse paroxysms, especially in the back high up about the renal region, and in one or the other, or even in both thighs. Occasionally the beginning of the pain is felt at the internal os as you just pass through it with the sound, but this I have observed chiefly in those cases where there was also anteversion or retroversion of the uterus.

Accompanying these symptoms there is often considerable dysuria, and yet a desire to micturate frequently. In a few cases I have been led actually to fear cystitis, but the character of the urine, which was normal, negatived the supposition. Sometimes complete anteversion was suspected, but belied again by an examination.

The following microscopical appearances in two cases are

from a careful examination of the mucoid contents of the cavity by my colleague Dr. Rogers, as withdrawn from it by Simpson's instrument for putting powdered caustic into the uterine cavity.

Case 1.—*Microscopical appearances.*

1. Blood-corpuscles, running into rouleaux and arranging themselves in a dendritic manner, appeared in this process of virtual contraction to entangle little clusters of white corpuscles in their meshes, giving an evidence of an inflammatory state.

2. Mucus-corpuscles of various sizes, from that of pus- to young epithelium-cells.

3. Veritable epithelial cells, with exquisitely thin walls, subglobular in form, and containing from one to several nuclei; in one instance a nucleus was involved with a cell-membrane like a daughter-cell; some contained fatty globules in their interior.

4. In some parts of the field mucus-corpuscles in larger amount, being compressed together, presented the appearance of an irregular membrane, while the fibrillated portion of the mucus added to the effect; no true mucus or basement membrane was seen.

Case 2.

Abundant blood-corpuscles, exudation- or mucus-corpuscles in masses, with epithelium-cells and fibrinous exudation, as some *elongated tissue-like appearances* were seen, in parts covered with exudation- or pus-corpuscles; many spindle-shaped corpuscles were mingled about.

The great mass was certainly epithelium covered with blood-, mucus-, or pus-corpuscles.

The anatomical arrangement of the nerves of the uterus, as shown by Dr. Snow Beck, which I quote here, as I have also elsewhere done, in elucidation, is in a very especial manner an explanatory commentary of these views.

"The neck or cervix and body of the uterus are supplied by different nerves, which take their origin from different

parts. The neck is supplied chiefly from branches of the lateral hypogastric plexus. These branches, reaching the uterus, interlace with branches of the arteries to the parts, and then lose their plexiform character and supply the neck of the uterus by fine branches." This hypogastric plexus, which extends from the inferior aortic plexus, is situated on the sides of the vagina, and in close connection inferiorly with the sacral plexus, constituting with it what Dr. Beck calls the pelvic plexus. Inflammation of the cervix uteri will thus produce pain in and about the pelvis, but especially at the lower part of the sacrum.

The middle part or body of the uterus is supplied by a branch which comes from the inferior aortic plexus, and running down by the side of the pelvis receives no communication from the hypogastric plexus, but passes directly to the superior part of the body of the uterus. It divides here, supplying the portion between the insertion of the Fallopian tubes and the termination of the previous branches. Now, the inferior aortic plexus extends from the root of the inferior mesenteric artery, *i.e.* in front of the third and fourth lumbar vertebræ to its division in the lateral hypogastric plexus, below the bifurcation of the aorta, *i.e.* to about the first bone of the sacrum. In inflammation, therefore, of the body of the uterus, the pain will be felt at the bottom of the two lower lumbar vertebræ and first bone of the sacrum. Some pain over the hypogastrium may also be felt.

The *fundus* of the uterus, or the portion above the Fallopian tubes, is supplied with nerves (as seen in the dissection of the gravid uterus) by a branch coming from the ovary. This branch to the ovary comes directly from the renal plexus which covers the kidney, accompanies the spermatic artery, and when about two and a half inches from the gland separates from the artery, taking a slightly different course to reach the middle of this body. It then divides into four branches, three of which go to the ovary; the fourth goes to the fundus of the uterus, and divides again into two branches, which supply the anterior and posterior parts of the uterus.

How frequently the cervix uteri alone is affected, and how exactly these limits of pain are observed, is proved by the assertion of some that the cervix is generally the only part affected or susceptible of treatment. So exact a limitation of disease of the body may not be possible except on general grounds, but that the fundus alone may be affected, or chiefly so, exclusively of the cervix, it is the object of this paper, if possible, to prove.

And here let me make one general observation as bearing upon the importance of the fundus as a distinct region. I have heard the remark somewhat jocosely made that it was impossible so small a portion of the uterus as is the fundus, compared to the body of the organ, should produce such important symptoms. But this idea arises from a misconception. It is, perhaps, not far wrong to say that the volume of the fundus, as can be shown by actual measurement, is perhaps not one third smaller than the body, and quite as large as the cervix, *i.e.* in a healthy state. Then it should also be remembered that in congestion of the upper cavity of the uterus we have a process taking place exactly analogous to that which occurs in pregnancy. There is in every pregnancy a preliminary congestion, but the increase in the size of the womb commences at the *fundus* immediately after the descent of the ovum, and as this is developed the body enlarges; last of all, and not before the fifth month, the cervix (Churchill, p. 74). This increase is greatest at the upper part or fundus, "a fact which appears to be proved from the alteration which takes place in the relative position of the Fallopian tubes, which are situated much lower down the sides of the uterus at full term than in the unimpregnated state, nor do they entirely regain their former position after labour until the female has attained an advanced age. Hence, as the cervix diminishes in length during the latter half of pregnancy, it follows that the difference in point of size between the fundus and the body of the uterus and this part will be continually increasing." (Rigby's 'Midwifery,' p. 19.)

Now, what applies to pregnancy is in degree true also for

congestion of this organ, especially if of long duration. When pressure, therefore, above the pubis gives pain, it is in most cases, not the body of the uterus, but the fundus which is pressed upon, and that because the fundus has chiefly enlarged upwards. The body is still concealed by the pubis and behind it. The body, indeed, if anything, is lower in the pelvis than ordinary, being weighed down by the increased weight of the uterus. It is, in fact, less get-at-able by pressure on the abdomen. That this is the case I have often verified by the sound, which in such examples may often be passed without the slightest annoyance within the body of the uterus, but produces the greatest pain when touching the fundus.

In practice I have met four forms of fundal endometritis, which I shall speak of as—1st, the Convulsive Variety; 2nd, the Obstructive; 3rd, the Chronic; and, 4th, the Acute.

The Convulsive variety occurs chiefly in young females whose sexual organs have assumed an unusual development, or from marriage or other causes have been unusually excited. Most frequently, however, I have met with it in unmarried young females. It is always accompanied with some sort of convulsive complication. I find, however, at the outset I am at issue here with observers who have described internal metritis of the body.

Speaking of internal metritis cases, Aran (p. 439), having reference to the hysterical symptoms which may occur, remarks, "On the contrary, with girls and women in great cities the hysteriform phenomena of the most varied character may present themselves, save and excepting the great convulsive seizures, which are very rare;" and Dr. Tilt, in relation to the symptoms of internal metritis, speaking, as I gather, of fifty cases, states, "All were nervous, irritable, desponding, bewildered, subject to neuralgic and hysterical phenomena, but only three had convulsive hysteria; which does not coincide with the statement made by Dr. Routh, that internal metritis causes à strong tendency to convulsive affections" (Tilt, on 'Uterine and Ovarian Inflammation,'

p. 235). Clearly, therefore, in the above quotation from Aran, he is speaking of internal metritis of the body, excluding the fundus altogether. Dr. Tilt, on the other hand, has *misread* me ('Brit. Med. Journ.,' p. 220, 1862). I was here speaking, not of *internal* metritis of the body, but of *fundal* endometritis.

Where the disease is confined to the body, I agree with Drs. Aran and Tilt, convulsive affections do not occur.

In ordinary cases of internal metritis of the body, as opposed to that of the fundus, the diagnosis is easy. The secretion will show no direct difference. But in the former the cavity is large, widened, so that the sound may be moved freely, sometimes turned within it, which is not the case in the latter, but the fundus is not painful. Pain, if felt at all, is felt in the cavity. Pressure also from the abdomen gives no pain unless very heavy, or unless made by passing the fingers downwards *between* the pubis and uterus, and then pressing backwards upon the spine. I have found this means of diagnosis easy in practice. On the other hand, in fundal endometritis it suffices to push the fingers placed perpendicularly to the abdomen just *above* the pubis and to make pressure against the spine, when pain, sometimes agony, will be induced. Moreover, in many a case of fundal disease the uterus may be played per vaginam on the finger without annoyance, while it is very painful to do so in inflammation of the body.

The diagnosis will be more easily made out by reference to the following cases.

A. B—, æt. 17, was a very peculiar excitable girl. She was regular, but had begun to menstruate early. She was what might be called a fine-grown girl, with full mammary development. At the time I saw her she was sneezing convulsively. The sneezing had continued with little intermission for two days, and gave no evidence that it would pass away. She was complaining a good deal of abominal pain and backache, rather high up. Pressure on the abdomen gave no pain, except when made over the fundus, and here it was very acute. I could learn nothing further as to the sneezing but this. A fortnight previously, when mending a pen, she had

felt something prick her eyelid, and this was soon after followed by a sneezing fit which recurred at longish intervals for two days and then passed off. It was supposed to be a cold. It was only on her returning home, and when considerable delay occurred in the appearance of the catamenia, that this sneezing recurred. The patient when I first saw her was much exhausted by the sneezing. I felt somewhat puzzled as to what I had best do. I first used belladonna liniment over the face and forehead and gave her anti-spasmodics, but without effect. It then occurred to me to put her under chloroform. I did so. This stopped the sneezing, but brought on an epileptoid convulsion and a peculiar convulsive cough. Subsequently she got better, but in a day or so the sneezing recurred. I took measures to bring on the catamenia. But as the pain in and about the fundus was excessive, I made an examination. I found the uterus was very tender on dancing it on the finger, but as the hymen was intact and the girl so young, I did not pass the sound. I used the smallest speculum, and found the aperture of the os very red, and exuding mucus. The most marked peculiarity was, however, the excessive fundal tenderness. The sneezing after a day or so again recurred. The exhibition of the chloroform produced an epileptoid convulsion as before and the convulsive cough. Dr. Walshe saw her with me afterwards, but could find nothing to account for the sneezing. Dr. Murphy also saw her, and concluded with me that it was fundal mischief. Measures were taken to allay this in the shape of counter-irritants, aloetics, sedatives. The catamenia recurred, and she quite recovered. Occasionally she would sneeze once or twice, but no regular convulsive attacks recurred. I think it was months afterwards that, feeling a pricking sensation in her eyelid, attention was again drawn to it and a piece of pen removed. From this time all sneezing disappeared.

Two years elapsed, and one day I was summoned again to see my patient. The aspect of affairs was now changed. There had been again irregularity of menstruation, and my patient, I

heard, had been put out by some trifling cause. At the moment I saw her she was in the full development of an attack of hysterical mania, with tetanus, opisthotonos and emprosthotonos, and was with difficulty prevented from injuring herself. I now adopted succussion of the spine, by which I mean striking the spine with the open palm, hardly and abruptly, a measure which I have more than once adopted with the most marked success in hysterical complications. After an hour or so I got the tetanus subdued and put her to bed. She was quite unconscious of what she said or did, but raved and talked immoderately. Pressure over the fundus gave intense pain as before. I now applied a liquid blister over the fundus, and injected morphine subcutaneously, but it was some four hours before she fell asleep for about one hour, when she became more rational and quiet. She complained still of intense pain when the fundus was pressed. This was relieved the next day by the blister, and she ultimately got quite well from this attack, the catamenia fully recurring.

Another case in which the symptoms were modified into genuine catalepsy may be here mentioned as showing another phase in the convulsive character of the disease. The attacks in this case occurred during sleep, about half an hour after going to bed. This was also a young girl, aged 16, I believe, but very tall and delicate. The catamenia had not appeared. There was backache, and, as before, intense pain over the fundus. When I was called I found her perfectly unconscious, pulse normal, but weak; lying as if asleep, but not to be waked, and quite stiff. On raising the hand or leg it remained in the position in which I had placed it. I at once recurred to the chloroform. As soon as she was fairly under its influence, relaxation of all the limbs occurred, and when she woke she was quite conscious. It was then on making the necessary inquiries and palpations I found the presence of amenorrhœa and fundal pain. These attacks recurred once or twice, but under the same treatment she got better and the catamenia came on. She removed to another part of the town, and I lost sight of her. But I understood

for a time the attacks recurred at the menstrual periods, but she is now well.

Years ago, in my lectures on endometritis, I mentioned just such another case, where hysterical mania persisted during three days in the case of a young girl, which disappeared temporarily after *succussion* of the spine. But depletion had also to be carried out locally and effectually before the fundal endometritis, which was also clearly made out, was overcome, and it was not until the catamenia came on copiously and regularly that the symptoms completely disappeared.

These three cases, however, will explain the probable origin of some of those remarkable instances of so-called chorea which have been mentioned by authors, and where the most extraordinary convulsive antics occur. It is remarkable that, in these cases, relief was only obtained when there was a copious flow of the catamenia: such, for instance, as in a case quoted by Sir Thomas Watson in his 'Principles of Medicine' (where he has, in fact, related several of these), the dancing and jumping lady, whose case is mentioned also by Mr. Kinder Wood in the seventh volume of the 'Medical and Chirurgical Transactions,' where all the symptoms disappeared on the same day in which the menses recurred; that of the jumping lady mentioned by Dr. Abercrombie, who, after convulsive actions of the body, actually jerked herself out of bed like a fish to the top of a wardrobe five feet high, then had rotatory motions of the head, &c. Temporary amendment in this case resulted from cupping to the temples for twelve ounces, and for weeks she was greatly better. But the symptoms would then recur, and required renewed bloodletting. But still the disease kept recurring till the poor creature became pale and bloodless. Then it was that measures were taken to bring on the catamenia by iron and aloes. She went on for three weeks, records Dr. Watson, the convulsive motions of the head continuing without intermission night and day. At length, in the middle of the night, the paroxysm ceased in an instant with the same kind of convulsive start of the whole body with which it used to cease after cupping. At the same time menstruation took place in a more full and healthy manner

than it had done for many years. From that time she remained well, at least to the period when Dr. Abercrombie wrote the account.

It may be stated that in these cases no evidence is given of the coexistence of uterine disease. This is true, but the direct connection of relief to all the symptoms with copious menstruation is remarkable, and of value as explaining the most probable origin of the disease. In a case of catalepsy followed by a labour recorded by Dr. Gooch, the same connection may be traced. One case I lately saw where a girl, labouring under the complication, kept jerking her body forwards convulsively so that her head nearly struck her knees, and this whether sitting or walking. The movements were in measure controlled in the recumbent position. In this case the fundal symptoms were very well marked, and the mere passage of the sound, and touching the fundus with it, gave rise to such violent jerkings that for a time walking was impossible. Indeed, had the poor girl not called for commiseration by reason of her sufferings, the movements were so ridiculous and peculiar that it might have been difficult to restrain laughter.

In one or two cases which I have seen the mania was scarcely hysterical. In one it was serious, so that not only did the patient take a violent dislike to her husband, but she sought to kill him with a penknife. Here caustic introduced within the uterus brought on the catamenia, and a cure followed.

But a more painful kind of mania is occasionally induced by this fundal mischief, and which assumes a sexual character. The most unchaste remarks and conduct may be provoked, and this with the purest of women. In one case, a nurse in a hospital, it gave rise to most unpleasant hallucinations,—a charge of rape being brought against the house surgeon and insisted upon most obstinately, although the patient was lying in a large ward between two other women, who of course disproved the whole story. I have no doubt in my own mind that this fact has been lost sight of in a late remarkable divorce case, and I should not have been surprised

if when looked for, this fundal affection might have been found present.

2. *The Obstructive variety.*—This variety is in measure dependent on co-existing obstruction at the internal os, produced from whatever cause. It is, therefore, not a pure and simple case of fundal disease only, but the peculiarity of this variety is the occurrence of pseudo-pregnancy, which does not, according to my present experience, occur, except with synchronous disease, congestive or inflammatory, at the fundus. This opinion I first enunciated in my lectures delivered in 1861 (published in March, 1862, 'British Medical Journal,' p. 220), as characteristic of fundal endometritis. I find that Dr. Tilt, in his last edition on 'Uterine and Ovarian Inflammation' (published—I gather from the date to the preface of this edition—in May, 1862, p. 235), states that when symptoms of early pregnancy are present without menstruation being suspended in comparatively young women, internal metritis may be suspected, even if the diagnosis be obscured by a large amount of inflammatory swelling of the neck of the womb." He goes on to say, "There may be sensations of abdominal fulness, of internal distress, or positive pain in the hypogastric region; a dragging, aching, and burning pain, and often the forcing tenesmoid pain of the contracting womb," &c. All I can say is that I have never observed the symptoms mentioned in the first paragraph quoted occur, except in fundal endometritis. In these cases, however, menstruation is often also absent. The symptoms enumerated in the second paragraph quoted are common to internal metritis of the body as well as fundus, but in neither of these have I observed the symptoms at all, except with more or less obstruction at the internal os.

The obstructive variety occurs both in young and middle-aged women within the menstrual periods. Its symptoms are different, and depending as they do on an accumulation of mucus within the cavity of the uterus, the symptoms may be at once described almost theoretically. The fundal pain and irritation generally precede the attack. There is generally more or less hysteria, with the usual *high* backache

symptoms, *i. e.*, towards the waist; symptoms which give a suspicion of pregnancy, and followed by a sort of mock labour pains, with a flow of menses and muco-purulent fluid. Here also I will instance three cases to bring out the symptoms more prominently. It was very early in my practice, when yet a student of medicine, that I became acquainted with a young and interesting married woman labouring under uterine symptoms. She was intensely hysterical, and liable to epilepsy. The pains were high up in the back, the catamenia irregular, and I was one day sent for in the idea she was about to miscarry. The symptoms which had preceded these were those I now ascribe to fundal endometritis; but, on making an examination, I came upon a uterus which every now and then was pushed against my index finger, as if by a labour pain, beginning in the back high up and ending at the pubes. There was every now and then some discharge, which passed away. I stayed several hours with my patient, for I was young and expecting she would miscarry, until I gave her some opium, which quieted her. But she did not miscarry, and for some time the case was a mystery to me. Mucus-coloured discharge was all I saw.

It was, however, some years after that I was sent for to a case in which similar symptoms occurred, and the explanation was clear.

M. B. C— was admitted under my care at the Samaritan Free Hospital, October 8th, 1860. She was a fair, stout woman. Married seven and a half years, with five children, all alive. Her father died at 48 of decline, but the disease did not exist in any other member of the family.

For a long time back and before marriage she laboured under backache with leucorrhœa mostly resembling chalk or milk, but occasionally it was yellow or coloured. Backache and headache were constant symptoms. The pain at this time was chiefly low down and near the fundament, extending in front, but she had also suffered severely from piles. Connexion was occasionally painful. The discharge she now had was never white but coloured. Six

years after marriage this backache was intense, but then also it was accompanied with inward piles. A doctor was sent for who, she states, fearing a miscarriage, "stopped up both passages." She went her full period. But since then she never has a motion without physic, and there is pain on both sides as well as in the back, and occasionally extending high up as far as the neck. Occasionally there is great pain in the right side, extending down the leg, when it suddenly gives way and an escape of matter takes place per vaginam, which she perceives, on getting up, is of a dark yellow, sometimes tinted with brown. The catamenia appeared as a speck two and a half months ago. Her last confinement was very tedious, and she could not walk for three months before delivery. Catamenia first appeared at thirteen, stopped for three or four months, and then came on regularly every three weeks, except when pregnant.

Examination.—Cervix very soft and velvety, as in pregnancy, except at the superior part, where there are some hard cicatrices. Uterus enlarged with an elastic feel, and not very movable, and containing something within it. The pain felt was chiefly referred to left side of the womb. Breasts areolar, dark and full. Suspecting pregnancy the sound was not introduced. An examination was again made on the 21st; acute pain came on, which did not yield to counter-irritants, and was very severe. On the 22nd, however, she was much better; the abscess, she said, had broken, and she felt the usual relief. The sound was now introduced, but did not penetrate much more than half an inch. Os exuding pus.

On the 23rd the pain recurred, blisters and purgatives were freely ordered. After the third blister the usual relief followed another escape of pus. The blistering treatment was continued. Once or twice pus appeared to come away as before. There was no more any deep-seated pain, but backache after long sitting up. On examination made to-day, sound penetrated much further. The uterus appeared smaller. The matter exuded was now more like white of egg. The nipples were paler. Breasts flaccid. Left the hospital November 12th, greatly relieved.

Some months afterwards I was sent to see this patient, who was said to be miscarrying. The catamenia, however, though painful and scanty, had been regular. She appeared to be in labour; pains high up in the back and extending downwards, as in labour, but no discharge. There was also great dysuria, and desire to micturate, as in cystitis. The uterus appeared to be bodily and forcibly pressed down on my finger when this was placed in the vagina. Large doses of opium were given. After two days the abscess was said to have broken again with the usual relief, the discharge being in addition somewhat bloody, but there was no evidence of any false conception nor of a fœtus having passed.

One more case I shall describe more briefly. It was that of a single woman aged about 35. She came in the Hospital with amenorrhœa. There was considerable fundal pain, and other symptoms of fundal inflammation. But as the symptoms of pregnancy were also well marked I dared not pass up the sound. There was some sickness. The breasts were also large, and the areola dark, with well-marked follicles, although the woman was fair. After much persuasion, she at last confessed having suffered once the embraces of a lover. The symptoms of something giving way, with occasional copious leucorrhœa, the fundal pain, and the fact that the uterus was large, although very much smaller than it would have been in a case of pregnancy where the catamenia had been absent for some months, the forcing pains, &c., all led me at last to suspect this variety of fundal endometritis. I subsequently used the necessary measures, and the result proved I was correct.

The diagnosis in this form of disease is only difficult in the first period of it, and this chiefly on the determination of pregnancy. Once, however, that peculiar descending action of the uterus has been felt by the index finger, a descent far greater than I have ever noticed in miscarriage, suspicion is justified that it is not pregnancy. When, however, more exact manipulation is made of the uterus, we shall find the pain on

pressure is greatest at the fundus, and not over the body of the uterus; in fact, all the symptoms before enumerated in the diagnosis between the inflammation of the fundus and that of the body are generally well marked. But when, in addition, the patient tells us of paroxysms of pain, followed by a sensation as if something gave way, and a free discharge of muco-purulent stuff per vaginam, we may be almost certain that this disease is present, and especially so if this sequence of symptoms have occurred at intervals of time on several occasions.

There is only one form of disease with which, I think, it may be confounded, and I say so because I have made the mistake myself. It is when cysts are sometimes formed high up, but external to the vagina. These may also inflame and burst, discharging their contents into the rectum or vagina. In these instances we have pain in the back, and sometimes high up. The suffering is intense for a time, and the relief by the discharge of the contents well marked. The diagnosis is, however, easily made. There is no symptom of early pregnancy. The uterine functions may be natural. The introduction of the sound is easy and painless, and not followed by blood. There is no thigh pain, and a digital examination reveals the presence of a painful tumour, to be felt through the posterior cul de sac of the vagina, external and distinct to it, and also when felt through the rectum, external and distinct from it also.

3. The third, *the Chronic* variety of this disease, is that which perhaps is to obstetric practitioners the most trying. Many of the so-called incurable cases of congestion of the womb and inflammation found among invalid and bedridden young females belong to this category. These cases, which have proved so controversial to medical men, are precisely those which are included among Dr. Gooch's examples of irritable uterus, the seat of the mischief in all of which I believe to be in the fundus uteri. I shall quote a case in illustration.

Caroline P—, æt. 35, and residing in a neighbouring metropolitan borough, was admitted under my care at the

Samaritan Free Hospital. She was a very dark, hairy, and Spanish-like woman in appearance. Twenty-two years ago had an attack of pneumonia with severe cough, when she first noticed a muco-purulent discharge per vaginam. Fourteen or fifteen years ago had a severe attack of backache, accompanied with bearing-down pains, a sense of heaviness about the womb, and a discharge per vaginam sometimes yellow and sometimes white. Coexisting with this backache (which was stated to be inflammation of the back) she had severe hiccough, which continued for five or six weeks, coming on at intervals of a few minutes. She was ill a considerable period, and then got better. Nine years ago she was travelling on the outside of a coach and caught cold and was laid up, and from that time her powers of progression were very limited. She could walk, though unsteadily, for half an hour at a time, after some weeks' illness, and on being removed to her home. She was ill for several months at Bath subsequently, with the same backache and discharge; but, improving, she came to London and was placed under Dr. Bantock's care for womb disease.

Her symptoms at this time appear to have been dysmenorrhœa, copious discharge, backache and bearing down pains: occasional fainting fits, and frequent hysterical fits.

Dr. Bantock opened the os, with some relief to the womb symptoms, but gradually the power of walking diminished, until at last she did not walk at all, and appeared as paralysed of the left leg especially, but the right was also very weak.

For the last nine weeks she has been unable to walk at all. She has now considerable pain at the lower part of the bowels and high up as far as the waist. There is also a good deal of bearing down, and a burning pain in the womb itself. There is also backache extending as high as lower dorsal vertebra and down over left thigh. There is copious leucorrhœa. An examination revealed intense vaginitis, and some anteversion; the os was red but not ulcerated. The sound penetrated the normal distance, giving no pain in the cervical

cavity, but producing intense agony as it passed the internal os, and developing the abdominal pain, backache, and pain down the thigh the moment it was pressed against the fundus.

An attempt was now made to make her walk; the pain, however, in the back and down the left side was so great it had to be abandoned. A bandage was now fixed tightly round the pelvis, but it had no effect in facilitating motion. There was some spinal tenderness, but no hip-joint disease could be made out.

The differential diagnosis in this third variety of fundal endometritis is not always easy. Hip-joint disease, spinal disease, dislocation of the pelvic bones, are the three diseases with which it may be compounded. The examination of the uterus specially, however, will soon set the question at rest, and in the case of the pelvic dislocation a bandage applied, if it relieve not the symptoms will at once belie this supposition. The local pain on pressure in spinal disease and hip-joint disease, characteristic as they are, are absent on the one hand, while the uterine pain is well marked.

4. The fourth and last variety which I shall speak of is the *Acute*—a fearful disease, because it passes so rapidly into peritonitis and usually ends fatally; fortunately it is of rare occurrence. I have met with it chiefly in married women.

And here let me again guard myself in my description. Let me not be supposed to refer to acute internal metritis, which besides general and local pain is accompanied by a *copious acrid discharge, excoriating the nates*, not unlike that which in severe attack of influenza is expelled from the nose. This disease is rare also, but acute fundal endometritis is rarer still; and I refer only to the latter.

Besides the general and special symptoms of fundal endometritis to which I before referred (only that in this variety the pain is very great, and the fever intense), its onset is usually marked by a very *inconsiderable quantity* of *leucorrhœa so inconsiderable that it may escape observation;* but this is so acrid that in two of the most acute cases I ever saw, and which both occurred in married women, the most

acute gonorrhœa was thereby induced in both the husbands, but in neither of the cases was there an appearance of this disease in the ladies, nor were their nates in the least excoriated; indeed, the symptoms in them were entirely restricted to the fundus, and I was called in chiefly owing to the presence of the gonorrhœa in the husbands. But in the ladies the usual and indeed invariable symptoms of fundal endometritis were most marked. The sound passed very carefully in both gave rise to great pain. In both a terrible chill seemed to be the exciting cause. One had gone twice to church on a very frosty day, and both times had come home shivering, in fact, amounting to almost continued rigors. The other, on a cold north-eastern day, had been driving in an open carriage, unduly protected with clothing. In both these cases I was assisted by my colleague, Dr. Rogers. One lady, however, died of acute peritonitis in one week. The other also had a sharp attack of peritonitis, but I am thankful to say recovered.

One remarkable circumstance I have nearly always noticed in this variety of disease, and it is that out of the ordinary period, and in lieu of the copious muco-purulent discharge observed in cases of acute internal metritis of the body, and when the inflammation is at its highest, there occurs a bloody discharge per vaginam, very like the catamenia. This is a contingency which to my mind is very characteristic of fundal mischief combined with peritonitis, and as I have seldom found it absent, I look upon it as very helpful sometimes to a correct diagnosis.

Sometimes, however, this extension of the inflammation is more gradual. The patient will linger longer, the peritonitis will be less acute. Still the mischief will begin in the uterus, the pain being chiefly referred to the fundus, and radiating thereupon. Such a case I saw with Mr. Drew of Dorset Square. The symptoms were masked in consequence of the subacute character of the peritonitis and coexistence of great liver engorgement; but from the first I was led to augur badly of the case, diagnosing this variety of disease. I believe that it may be produced by the careless and rough in-

troduction of the sound. But this peritonitis, called sometimes pelviperitonitis as a sequela to the introduction of the sound, occurred twice to Bernutz and Goupil, once to Dr. Gueneau de Mussy, and once to Dr. Oldham (I am speaking of published cases), and these gentlemen cannot be supposed to be capable of careless handling of their instruments. The result proves there must have been, and in this view Bernutz and Goupil concur, some predisposing cause, — I should say some previous and coexisting disease, and that disease fundal endometritis; such even, without any interference whatever, would sooner or later have passed into metroperitonitis. I am quite sure when I introduced the sound in the two previously mentioned married women, I did not produce the disease, it was only a synchronous result. Both husbands had first been contaminated by their wives, for which reason I was consulted; still the caution is not out of place, and I am satisfied if all the unfortunate cases of death from extension of this disease to the peritoneum were recorded, the caution would be admitted to be still more desirable. Indeed I make it a rule, wherever in these cases the uterine fundal symptoms are acute, to use antiphlogistic measures before I use the sound. If the same caution were observed before the use of internal uterine pessaries, fewer accidents would have occurred, and these pessaries would not have obtained their present bad repute.

Treatment.—The length to which this paper has reached must necessarily lead me to curtail what I have to say on the treatment. I must satisfy myself by merely indicating it.

In the first variety, chloroform during the paroxysm, copious local depletion at the uterus, and active measures to bring about the catamenia, is the treatment indicated. Nature seems to point out in these cases the salutary effect of a copious catamenial flow. Any remedies also which may tend to allay sexual excitement are indicated. And such we have in bromide of potassium and digitalis, which should be given in large doses. Of the former ʒss, of the latter, ʒj ter die. Leeches to the anus, better still to the uterus itself, and

especially blisters at the hypogastrium and back frequently repeated, are the local depletive measures I have found most successful. Dr. Chapman's *warm* water bag to the back is also most useful.

In the second variety, so soon as all inflammatory complications have been removed, the treatment is dilatation by sponge or sea-tangle tents, and the wearing an internal pessary if it can be borne, so as to give free exit to the muco-purulent discharges of the cavity. These latter pessaries, however, in this disease are only exceptionally borne. If they give pain they should be at once removed. At no time are they so likely to give rise to cellulitis. Where tents can be borne, after dilatation an injection of Tr. Ferri Sesq. or Tannin, followed by full doses of secale and iron internally, will oftentimes cure the disease. The same regard to enforcing quietude to the sexual organs should be had in this as in the former variety.

The treatment of the third variety is less satisfactory. Still the indications are the same. Here, however, the hysterotome may be used freely to lay open the internal os. For I have found that it is here especially that the greatest difficulty seems in the use of sponge or sea-tangle tents. Subsequently injections of iron may be used with advantage. When all inflammation has passed away, and when all that remains is a grumous, thick, uterine discharge, then a thin piece of caustic may be passed into the cavity and left there. It may give rise to some colicky pains, but is often effectual in bringing about a cure.

The treatment of the last and fourth variety is not usually successful. The recoveries are the exception. They are those of acute peritonitis with more or less toxæmia. Among the remedies best borne are large doses of opium and blisters, and frequent injections of warm water per vaginam. In the acute cases a period of one week, in the subacute of three or four weeks, is the duration of the disease. The recovery even when it occurs is long and often doubtful, and patients even then long continue invalids.

Such are my views on a disease which in its varieties I do

not think has been before described. Perhaps even this epitome of it may not be received by all. I quote, however, from no works. The opinions expressed have been entirely the result of long and anxious clinical inquiries. I believe I am describing nature. This must be my excuse for being so dogmatic.

Mr. Gaskoin, referring to exceptional cases of hysteria benefited by depletion, said he was particularly struck with that part of Dr. Routh's description which mentioned coxalgia as a symptom of endometritis. He related the case of an excitable young lady who had recurring attacks of most severe hip pain, evidently connected with the uterine function. After treatment by antispasmodics and all other means had wholly failed, this constantly yielded to cupping from the hip, the relief being, so to speak, immediate.

Dr. Tilt strongly objected to Dr. Routh's assertion that he had described a form of disease unnoticed by other pathologists, as, for his own part, he had devoted seven chapters to the study of internal metritis, in his work on 'Uterine Inflammation.' Dr. Tilt agreed with Dr. Routh that endometritis was very frequent and little understood, and he pointed out that it was so frequently unnoticed because it often coexisted with inflammation of the cervix which engrossed the surgeon's attention. He did not think Dr. Routh's classification would bear examination, and for all practical purposes it was sufficient to consider it as acute, subacute, or chronic. He had found acute endometritis very rare, and his worst cases had occurred in young, unmarried women, and he related a fatal case that had occurred to an old lady of sixty-five. Leeches and hot poultices to the abdomen, calomel and opium internally, and sedative suppositories, were the best remedies, and one patient derived the greatest benefit from hot and prolonged hip-baths. Dr. Tilt considered a sudden gush of fluid often corrosive or offensive after sharp uterine pain to be the best sign of subacute or chronic endometritis, and that when the gentlest pressure of the finger to an enlarged fundus gave exquisite pain, the walls of the womb should be considered diseased as well as its lining membrane. Dr. Tilt was convinced that many cases of subacute and chronic endometritis were cured by the leeches, injections, and other remedial measures adopted to cure the coinciding inflammation of the neck of the womb; so his first plan for treating endometritis was to maintain the cervix in the healthiest possible condition. The second

indication was to ensure a free exit for what accumulated in the womb, which would permit the safe injection into the womb of a solution of nitrate of silver or of tincture of iodine in such cases as would not otherwise get well.

Dr. Gervis was hardly prepared at once to accept the classification proposed by Dr. Routh. The differences, for example, between the two varieties of fundal endometritis, termed convulsive and obstructive, appeared to depend on circumstances accidental rather than essential. The local disease in each case was the same, but occurring in the one in an individual of highly susceptible nervous system it induced various nervous disorders; while in the other, owing to a closure of the internal os, the fluid products of the endometritis accumulated in the uterine cavity, and gave rise to those symptoms so ably described by the author of the paper. But it could hardly be said that it was the metritis that was either convulsive or obstructive. With respect to the tendency of acute metritis to become associated with pelvi-peritonitis, and on the extreme gravity of the symptoms, Dr. Gervis could fully corroborate Dr. Routh, and mentioned particulars of a case of recent occurrence which bore out the author's view.

Dr. Rogers said he thought Dr. Tilt, from his remarks, must have mistaken the object of Dr. Routh's paper, which was to make known to the Society his opinion that the part of the uterus situated between the Fallopian tubes is at times found to be the special seat of acute or chronic inflammation. In support of his opinion he brought forward the fact that this part of the uterus was supplied by special nerves coming from a particular plexus, and some interesting clinical cases, which, in his opinion, proved that the inflammatory state is often more intensely located in the fundus—hence named by him Fundal Endometritis. Dr. Routh was a good clinical observer, and he had observed with Dr. Routh some of the cases narrated, and he believed there was reliable evidence for Dr. Routh's conclusions, which he thought threw light on and explained the symptoms of many otherwise inexplicable cases.

Dr. Routh, in reply, said he had no doubt the case mentioned by Mr. Gaskoin was one of this disease. Dr. Tilt's works were known to Dr. Routh. Still Dr. Tilt had spoken of these diseases generically as due to inflammation or congestion of the uterine lining membrane; but he, Dr. Routh, had spoken of those four varieties as only referable to the fundal endometritis, which was not asserted by Dr. Tilt in his able paper. Each of these four varieties had special and characteristic symptoms. Dr. Tilt's last two cases were clearly subacute cases of the fourth variety. Those spoken of by Matthews Duncan as leucorrhœa in old women were cases of the second variety. Dr. Rogers had fully vindicated his, Dr. Rogers', views, and he could only thank him

for having done so. He did not quite agree with Dr. Gervis. It was true the first and second variety were modifications of the same disease, but in different phases. So rheumatism was a disease in endopericarditis and in rheumatic ophthalmia, but the symptoms produced were very different, and hence required different description and treatment; and so with his, Dr. Tilt's, first and second varieties. Lastly, in answer to Dr. Madge. The first three varieties were seldom, if ever, fatal; hence, post-mortems were not likely to occur. The fourth variety was so, but, as an accoucheur, he felt strongly that he should not make post-mortems of peritonitis cases, and so he had not asked to make post-mortems in those cases which had occurred to him.

MAY 4TH, 1870.

Dr. BRAXTON HICKS, Treasurer, in the Chair.
Succeeded by Mr. JOHN SCOTT, F.R.C.S.

Present—42 Fellows and 2 visitors.

Dr. HEYWOOD SMITH exhibited an ovum which was expelled under the following circumstances. A woman, æt. 36, pregnant for the twelfth time, was delivered of a child at term at 11.50 a.m., on April 6th, 1870. At 8 p.m. the same day, with one pain the specimen was passed; it was about four inches across. On being opened a fœtus three eighths of an inch long was found loose, attached to which was a piece of cord about one and a half inch long, considerably swollen. The inner surface of the amnion was studded with very minute protuberances. It was referred to Dr. Meadows, Dr. Phillips, and Dr. Heywood Smith, for a further report.

Dr. W. S. PLAYFAIR showed a specimen of malformed heart from a child who had lived to the age of nine months. She was deeply cyanotic, but was otherwise well nourished and in apparently good health. Two or three days before death a sudden attack of extreme dyspnœa came on, which proved fatal. Both auricles were normal, but there was practically only one ventricle—the right, the left ventricle being almost rudimentary. Both the aorta and pulmonary artery arose from the right ventricle, in the septum between it, where small left ventricle was deficient at the upper part. Through this opening one of the two curtains forming the right auriculo-ventricular valve passed, and it was attached

to the musculi papillares of the left ventricle, which were well developed. In the hurry of the post-mortem the great vessels had not been carefully dissected, so that their relations to each other were unfortunately unknown.

Dr. Wiltshire mentioned that Dr. Elliott, of Carlisle, had read a paper on a case of univentricular heart (which practically the heart exhibited by Dr. Playfair was) before the Royal Medical and Chirurgical Society. That heart was obtained by Dr. Elliott from the body of a young man, aged 19. This showed that life was possible in a human being, even when the heart resembled that of a turtle.

Dr. Wiltshire added that Dr. Elliott's specimen was in the Museum of the Newcastle Infirmary, where he had lately seen it.

PERSISTENT SICKNESS; LABOUR INDUCED AFTER FULL PERIOD HAD ELAPSED, SCARLATINA IN THE ROOM.

By A. Wynn Williams, M.D.,
PHYSICIAN, SAMARITAN HOSPITAL, AND OBSTETRIC PHYSICIAN, WESTERN GENERAL DISPENSARY.

J. C—, æt. 28, mother of six children. About four years ago had an attack of severe sickness during a pregnancy, and did not go her full time. In her five other pregnancies and labours she has had pretty easy times. During the present pregnancy she has never been quite well, for, from a very early period, she has suffered from occasional attacks of vomiting with pains in the head, but not to such an extent as to confine her to bed. About the end of December last these attacks became more frequent, and she could retain scarcely any food. In the beginning of January she was so reduced as to be obliged to keep her bed altogether. On the

6th of January she became a patient of the Western General Dispensary, and was ordered

℞ Sodæ Bicarbon., ʒiij;
Acid. Hydrocyanic dil., ♏xxx;
Aq. a ℥x. M.
℥j ter die s.

This produced no effect, and on the 8th she was ordered

℞ Bismuth. Alb., ʒij;
Liq. Potassæ, ʒij;
Acid. Hydrocyanic. dil., ♏xxx;
Mucil. Acaciæ, ℥j;
Aquæ a ℥x. M.
℥j ter die s.

The symptoms, vomiting, pain in the head, and weakness increasing, I was asked by the house surgeon to see her, which I did on the 10th, and ordered

℞ Cerii Oxalat., gr. iv.
One pill every six hours.

This she continued to take during the remainder of the pregnancy, the dose being increased to gr. v on January 20th, and to gr. vj on February 7th. On January 18th she was ordered, in addition, three ounces of brandy daily; this was continued to the 27th, when wine was attempted to be substituted, but was immediately rejected, when the brandy was again resumed, and continued until labour was induced. During this time the vomiting had been frequent, the brandy, and occasionally some beef tea, being the only things that were retained by the stomach. There were, however, occasional remissions for a day or two at a time, and on these days there would be only a feeling of sickness and retching.

On the 20th of February I visited her to see if it appeared necessary to take steps to hasten her delivery, but as she thought she had had some premonitory pains I did not interfere. She had calculated from the time she quickened that labour should not have been later than February 14th, and as the last men-

strual period was in the beginning of May, this would have been the right time, and it was about this time that she began to have occasional feeble labour pains, which continued for a few days only, and then entirely ceased. On February 28th, on visiting her I found her lying perfectly helpless, with a very feeble rapid pulse; pallid to a degree, her hands being quite transparent. Any uterine pains she might have had having entirely ceased, I made an examination per vaginam, and found the "os" dilatable to almost any extent, but there was apparently no power to bring forth. After due consideration, and before proceeding to deliver by turning on account of the extreme debility of the patient, I determined to try whether the introduction of a catheter between the membranes and the wall of the uterus would incite the uterus to contraction. This I accordingly did, being careful not to rupture the membranes, at about 4 p.m.; the catheter being left in the uterus; she was also ordered to take a dose of ergot every four hours. In the course of an hour from the time the catheter was introduced, and before any ergot was taken, labour began and continued to increase; the child, a remarkably fine one, being born about two o'clock the following morning, after an easy labour. The mother, although so fearfully reduced, has since progressed slowly but steadily. About the middle of February, her children, living in the same room with her all the time, had scarlatina, and one of them died of it on the 8th of March; and although the shock threw her back somewhat, she soon rallied, and certainly suffered in no way from the presence of the scarlatina poison.

ON TWO CASES OF TWINS, IN WHICH, WHILE THE FIRST CHILD PRESENTED NATURALLY, THERE WAS PLACENTAL PRESENTATION WITH THE SECOND.

By John Brunton, M.A., M.D.,
SURGEON TO THE ROYAL MATERNITY CHARITY.

The narration of the following cases will, I think, on account of their rarity, be of some interest to this Society. Cases of placental presentation and their treatment, successful or unsuccessful, ought always to be recorded. If successful, our guide to treatment is established, if unsuccessful, we are warned as to the dangers which we might meet any day.

Case 1.—On the 28th day of December, 1867, I was sent for to attend Mrs. H—, æt. 28, in her fifth confinement.

When I arrived I found that the liquor amnii had escaped with a gush, followed by the head of the child. The next pain delivered the child, and then ensued a tremendous gush of blood, the loss of which caused my patient to faint. I at once grasped the uterus with my left hand, and on doing so discovered the uterus to be large, and evidently containing another fœtus.

Examination, per vaginam, disclosed placental presentation with the second child; the vagina was full of blood, and a considerable stream was coming away.

I at once slipped my left hand past the placenta, through the membranes, into the uterus, turned the child and delivered it. The placentæ were delivered in a few minutes; the mother rapidly recovered the shock, and ultimately did well. There was no succeeding hæmorrhage; the second child was born alive, and is alive now—the first was dead. One of the placentæ, for there were two, was covered with clot, indicating previous separation. There had been no hæmorrhage before the birth of the first child. The children were females, each in its own set of membranes.

Case 2.—On the 2nd day of December, 1869, at six o'clock, I was sent for to Mrs. F—, æt. 29. She was in the eighth month of her second pregnancy. On arrival I learned that she had had some diarrhœa, and when at the closet she felt a rush of fluid issuing from the vagina; on getting upstairs to examine herself, she found that it was blood. She had been bustling about a good deal that day.

On examination I found the vagina full of blood, the os uteri closed, and that there was no labour. I administered an opiate, ordered her to keep still in bed, and to send for me if the bleeding came on again.

At 10 p.m. I was summoned, the hæmorrhage had set in alarmingly about a quarter of an hour before. As she lived close to my house I was present with her in a few minutes. She had had a little uterine pain.

On examination I found blood coming away rapidly, the os uteri the size of a crown piece, with a bag of membrane protruding. Introducing my hand into the vagina in order to make a proper search for the placenta (for the child was still above the pelvic brim, vertex presenting), I could not find it, though I passed my finger well into the uterus and round the neck. As the hæmorrhage still went on, and there was a dilatable os with a little labour pain, I gave a full dose of ergot, and ruptured the membranes. The hæmorrhage at once ceased; by manual dilatation, accompanied by abdominal frictions, I delivered a dead male child at 10.15 p.m. The delivery was succeeded by great hæmorrhage. On endeavouring to ascertain the cause of the hæmorrhage, I found the uterus large and only partially contracted, and that evidently another fœtus was in it. On examination per vaginam the os uteri was filled up with the placenta, which was partly adherent; I introduced my left hand, detached the whole placenta, and brought it out on the bedside. It was double battledore and clotted over half its extent, as in the former case. On the removal of the placenta the hæmorrhage at once ceased. By stimulating the uterus to contract by means of abdominal frictions, a second child was soon born (in about five or six minutes), wrapt in its membranes.

The child was alive, and lived thirty-six hours. The uterus contracted well, and the mother has done admirably.

Twin males in separate sacs.

Remarks.—First of all, whence the hæmorrhage? evidently from the uterine sinuses which were left open in the semi-contracted state of the uterus after delivery of the first child. In both cases the hæmorrhage might be called accidental. In the first case, probably the hæmorrhage was in utero before the birth of the first child, and was concealed accidental. In the second case, the hæmorrhage was early, and as the placenta could not be found on examination, we might call it pure accidental.

Secondly, what about the placenta? In the first case we may conclude that the placenta of the first child had been separated during labour, and not before, as there is no history of strainings or hard work in this case. That this is probable is borne out by the history—sudden fainting of the mother, great hæmorrhage, and dead child, the second child being alive.

In the second case, where there was one placenta, or, more properly speaking, two placentæ joined into one, it is probable that the mother caused separation of that part of the placenta belonging to the first child some time before labour set in; hence the early hæmorrhage and the death of the first child; and it is very likely that the previous detachment of part of the placenta, aided by pressure of blood clot and uterine contractions, caused the whole placenta to be detached and to slip down or turn over upon the os uteri. I have mentioned that I felt the placenta partly adherent; this adhesion was in all likelihood membranous. It is interesting in this case to find the second child alive, even though the placenta was so long on the bedside.

Thirdly, I have said that the placenta presented with the second child. I do not mean to say that these cases were such as are usually denominated placenta prævia, where the site of the placental attachment is partly or wholly over the os uteri, but only that a condition existed, belonging to

both cases, viz., that on examination there was extensive hæmorrhage, and a placenta occupying the os uteri.

Such cases as I have narrated are extremely rare; I have searched the works of numerous obstetricians, and have been unable to find such.

Dangerous as accidental hæmorrhage is, and more so accidental concealed, I should say that hæmorrhage arising from causes such as I have narrated is much more dangerous, because when one child is in utero, we usually get good uterine contractions set up, and consequent closure of the mouths of the uterine sinuses; but, in cases of twins, there is often a considerable period of time between the birth of the first and the second child, and so we can easily see the extreme danger that might arise were the first placenta to become detached, and the uterine contractile action to cease. One can fancy with horror such a case.

Now as to treatment: I did not lose any time when the urgent symptoms were declared. In the first case, I "turned and delivered," giving ergot, and stimulating the uterus to contract by manual frictions over the abdomen. In the second, I followed Professor Simpson's plan, and detached the entire placenta, and followed out similar secondary treatment to that in the first case.

TEMPERATURE VARIATIONS IN THE DISEASES OF CHILDREN.

By William Squire, L.R.C.P. Lond.

In prosecuting the investigations which formed the subject of my last communication to this Society, a large number of observations have accumulated, some of which may now conveniently be brought together, arranged, as much as possible, in the order that has guided me in this inquiry.

The object, foremost in my view, has been to gain a more definite idea of the natural history of the states of disease to which children are specially liable, and to illustrate the more leading features of the most marked and common forms of the acute specific diseases. As a consequence of this it is hoped that some addition might come to our certainty in diagnosis, and especially to our power of identifying at the outset those diseases most requiring early recognition. This is important, not only in the treatment of the individual, but for the protection of other members of a family and the community at large. There are also considerations of therapeutics and of hygiene which naturally follow, and are not unconnected with the line of observation pursued.

In some of the exanthemata the development of the eruption is followed by a fall of temperature, in others the temperature at this time does not show the same tendency to fall. Measles and scarlet fever being taken respectively as representatives of these two classes of disease, it may be remarked that in the one there is generally a long incubative period, that in the other this is generally short; in fact, the skin is the first tissue in the latter disease to be affected, though by no means the last, while in the former, as is well known, a catarrhal period of considerable severity, and of three or four days' duration, precedes the eruption.

In a previous paper instances were given to show the probability of the pre-eruptive period in measles being infectious, positive evidence can now be adduced to show that this period is not without temperature changes sufficient to give warning of the danger of infection before the rash, which in scarlet fever is warning sufficient, has had time to appear.

The temperature-changes for the initiatory stages of measles are given in the accompanying tables. These, and some others which follow, are of interest as indicating:

(i) By alterations both of pulse and temperature an excitement of the system caused by the presence of the poison;

(ii) By a well-marked depression of temperature the point from which the commencement of the disease may in reality be dated;

(iii) By the special series of temperature-changes characterising the particular disease present.

TABLE 1.—*Pre-eruptive stage of measles. Morbilli.*

A girl, æt. 5 years, exposed to infection March 30th, cough on April 2nd.

Days of illness.	Date.	Pulse.	Resp.	Temperature in axilla.	Remarks.
4	April 3	110	26	98·6° noon	Slight cough and coryza.
3	„ 4	120	32	99·4° „	Eyes red, tonsils full.
2	„ 5	120	30	100·7° „	Doubtful mottling of parts of skin.
1	„ 6	104	30	99·0° „	Face mottled.
0	„ 7	100	26	97·3° „	Skin clear, slight cough.
1	„ 8	110	26	99·2° „	Respiration weak, a wheeze on forced inspiration.
2	„ 9	130	30	100·3° „	Ill, but not in bed.
3	„ 10	130	40	100·5° „	Respiration clear, spots of measles visible.
4	„ 11	...	...	102·0° „	Rash; purulent secretion from the conjunctiva.
5	„ 12	...	...	... „	Rash fully out, eyes better.

A boy, æt. 4 years, exposed to infection March 30th.

Days of illness.	Date.	Pulse.	Resp.	Temperature in axilla.	Remarks.
1	April 9	120	30	98·6°	Looks ill, frequent spasmodic cough.
2	,, 10	140	35	101·3°	No rash, wants to go out.
4	,, 12	...	...	102·6°	Spots appearing on temples, cheeks, and behind ears.
5	,, 13	...	...	103·0°	Full dark rash, face swollen, frequent vomiting.
6	,, 14	...	...	...	Defervescence, takes food well, tongue clean; skin of many parts of the body desquamated in the following week.

Table 2.—*Morbilli.*

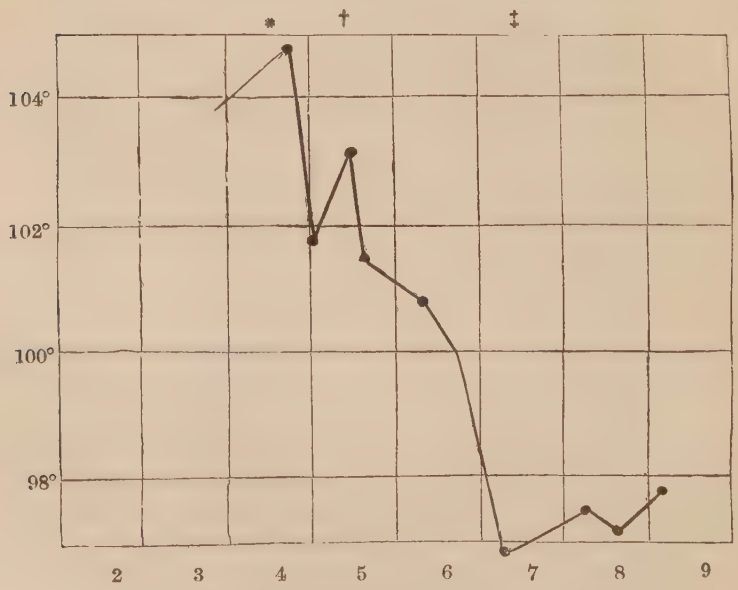
Case 1.—A boy, æt. 12½ years, exposed to infection March 20th, did not appear to be well on the 26th.

Days of illness.	Date.	Pulse.	Resp.	Temperature in axilla.	Remarks.
2	March 27	...	...	...	Cough.
3	,, 28	...	...	...	Ill, with hoarse cough.
4	,, 29	130	40	104·5°	Well-marked rash; delirium.
5	,, 30	130	40	101·6°	103° at 5 p.m. after wine, diarrhœa, 101° only at night, with very full rash.
6	,, 31	100	36	100·6°	Rash at fullest and darkest, slight cough, no diarrhœa.
7	April 1	108	36	96·8°	Rash less intense, râles at both pulmonary bases.
8	,, 2	96	32	...	Hoarse cough, appetite returning, takes wine.
9	,, 3	74	24	97·6°	Less cough, râles audible on forced inspiration.
11	,, 5	...	...	...	Seemed to be well, parotitis occurred on April 9.

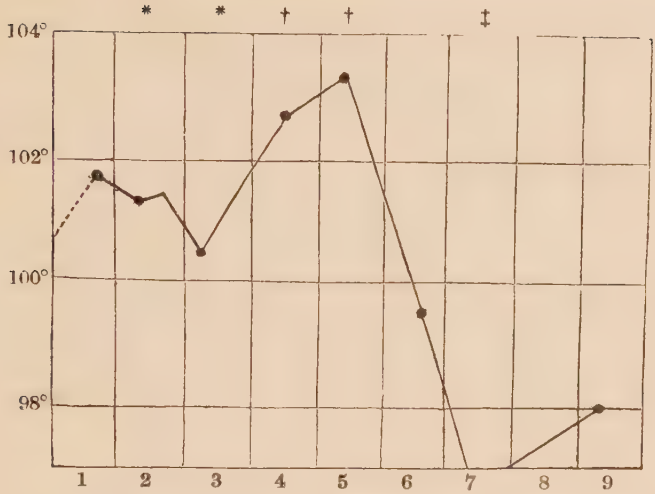
Case 2.—A boy, æt. $6\frac{1}{2}$ years, was with the boy whose case is last given from March 26th to March 30th.

Days of illness.	Date.	Pulse.	Resp.	Temperature in axilla.	Remarks.
1	April 5	120	40	101·8°	Does not feel ill, conjunctiva red, tonsils full.
2	„ 6	100	40	101·5°	Small red spots on lip and cheek.
3	„ 7	110	30	100·5°	Herpes of lip and cheek.
4	„ 8	130	40	102·6°	Seems ill, rash of measles at night.
5	„ 9	130	50	103·3°	Full rash on face and shoulders.
6	„ 10	120	30	99·5°	Body covered with rash; perspiration.
7	„ 11	...	...	97·4°	Tongue furred, some bronchial râles.
9	„ 13	...	...	...	Convalescent, no râles.

These two cases may be represented in diagrams thus:



* Rash of measles. † Wine given once.
‡ Bronchial râles, wine repeated.



* Herpes of lip. † Rash of measles. ‡ Bronchial râles.

Parotitis.—Mumps is the most nearly related to measles of the acute specific diseases. The period of incubation is even longer; a fortnight generally passes between exposure to infection and the full development of the disease; and where no attempt has been made to obviate sources of infection, or where the child, after mumps, has returned to the family too soon, an interval of two months has elapsed between the one case and the next. This, however, is the longest that has come under my notice.

Under my observation, the interval from complete separation from all sources of infection to the first symptom of disease has been nineteen days, though the time passed in that instance after the greatest exposure to infection was twenty-two days. Exactly this time elapsed from removing a child with mumps, who had been three days in the house, before a servant remaining in the house felt the first symptom of the disease.

The whole of this intervening period has not been occupied by temperature-observations. Occasional fainting, and a feeling of weakness occurred in a delicate girl for nearly three weeks before mumps was declared. Once, on a wound showing

an indisposition to heal in a general healthy lad, mumps appeared at the fortnight end. In some cases symptoms of illness have been noticed for more than a week before the swelling of the glands. For a week or more after exposure to infection there is seldom any evidence of disturbed health, the feeling of illness being generally confined to the day preceding the swelling. Infants do not take the disease as readily as older children. It may, however, be well characterised at the age of a year and a quarter, and in the case of one child still younger (who had, however, completed his first year), and who was much exposed to infection in a large nursery of children, the following temperature-observations were for a week taken consecutively before any signs of mumps could be detected.

TABLE 3.—*Pre-eruptive stage of Mumps.*

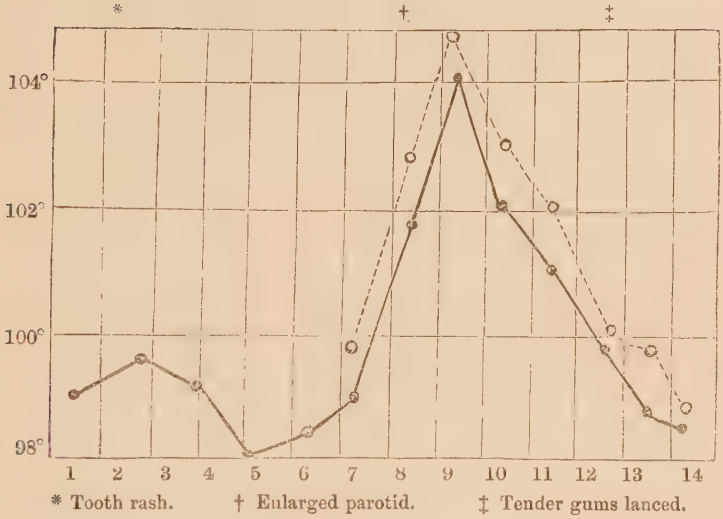
CASE 1.—A boy, æt. 1 year.

Day of illness.	Date.	Temperature.	Remarks.
—3	April 7	99·0° axilla	Two upper molars at gum, red spots on arm.
—2	„ 8	99·5° „	Small spots of herpes or strophulus on arm.
—1	„ 9	99·2° „	Seems well, no other spots on skin.
0	„ 10	98·0° „	
1	„ 11	98·6° „	
2	„ 12	99·6° „	Excitable.
3	„ 13	101·8° „	Vomited, parotid glands first perceptible.
4	„ 14	104·7° *in recto*	at night. One submaxillary gland affected.
5	„ 15	102·0° axilla	Seemed ill all day.
6	„ 16	101·0° „	102 *recto*.
7	„ 17	99·6° „	Some swelling of both sides of face.
8	„ 18	98·6° „	99·7° *recto*. Herpetic spots near left ear.

Point of left upper molar at gum and corresponding gum on right side full, both lanced; child well.

Of these fourteen days of pyrexia, the first three and the last two were probably owing to the teeth; there were, however, five days consecutively febrile, and it was not till the third of these that the child obviously had mumps.

This case is thus represented in diagram.



The dotted lines in this and a subsequent diagram represent the temperature *in recto.*

In this case, what might be the import of that temperature nearly of 105°, had it not been known that the poison of mumps was maturing in the system and would probably be cast off with no greater accident than a special irritation of certain fibrous and glandular structures? and is it not evident that the special affection of these glands is the final result and consequence of the illness under notice, and not the cause of the illness? It has seemed that in some cases the salivary secretion, as well as those of the mouth and throat are deteriorated; not only is there a peculiar odour from the mouth but ulceration at the orifice of the salivary duct has been noticed in the course of the disease.

TABLE 4.—*Mumps.*

CASE.—A boy, æt. 13 years, at home for the Michaelmas holidays, exposed to the infection of mumps at school, had

not seemed in his usual health since he left; he became easily tired. On October 1st, after a long walk, had headache, and again on October 5th, from no assignable cause.

Day of illness.	Date.	Pulse.	Resp.	Temperature. Morning.	Temperature. Evening.	Remarks.
1	Oct. 6	...	...	...	...	One side of throat tender, and neck stiff.
2	„ 7	100	24	101·2°	103·0°	Left parotid and right submaxillary glands enlarged, bowels open, urine free, delirious at night.
3	„ 8	110	27	102·4°	102·4°	Face swelled, eyes red, vomiting, better at night.
4	„ 9	84	26	100·2°		Swelling of parotid less hard, no pain.
5	„ 10	68	24	98·4°		No swelling of parotids, a little of left submaxillary gland.
15	„ 20	...	...	...	...	Quite well, had felt weak till now, no metastasis, no relapse.

Cases.—A boy at home ill with measles on April 1st, has mumps on April 9th; four younger children in the house are in the same room with him from the 5th to the 9th, and after the 11th of April.

Case 1.—A girl, æt. 11 years, not having looked well for a day or two is restless at night, and has pain under the ears on April 22nd.

Day of illness.	Date.	Temperature. Morning.	Temperature. Evening.	Remarks.
2	April 23	100·0°	101·0°	Swelling of both parotids, and pain.
3	„ 24	98·8°	...	Much swelling, pain relieved.
4	„ 25	97·2°	...	Glands still painful.
5	„ 26	...	...	Nearly well, perspired at night.
8	„ 29	...		Not febrile, relapse, submaxillary glands affected.

Case 2.—A girl, æt. 9 years, who had not looked well for nearly a week, is slightly febrile on April 22nd, has signs of mumps on the 24th.

Day of illness.	Date.	Temperature. Morning.	Evening.	Remarks.
1	April 23	...	99·4°	Slight swelling of both parotids, right most.
2	„ 24	100·7°	100·9°	Face flushed, left eye pink, severe pain.
3	„ 25	98·5°	...	Great swelling of both sides, is hungry, but cannot eat.
4	„ 26	97·7°	...	Great redness and swelling.
5	„ 27	..	...	Swelling less, redness persists.
6	„ 28	...	...	Epistaxis.

Case 3.—A girl, æt. 8 years nearly, exposed to infection of mumps on April 9th, has the right parotid perceptibly enlarged on April 23rd, with no complaint of illness until awoke in the night by severe pain, she is languid in the morning and excitable, but not ill at night.

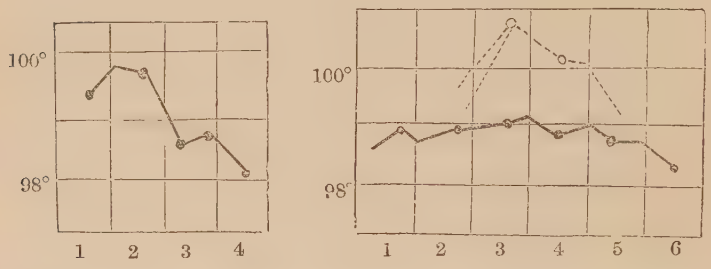
Day of illness.	Date.	Temperature. Morning.	Evening.	Remarks.
1	April 23	98·2°	99·6°	Severe pain in the night.
2	„ 24	99·2°	98·6°	One parotid tender, the schlerotic of one eye pink.
3	„ 25	98·5°		Both sides swelled, severe pain in right ear, chloroform given.
4	„ 26	97·1°		Pain on left side.

Case 4.—A boy, æt. 6¾ years, same exposure to infection, had swelling of the right parotid on April 25th with a temperature of 100°, pulse slightly quickened, respiration not affected, no complaint of illness, is sent to bed; April 26th no pain, not much appetite, temperature 100·7°; next day there is swelling commencing on the left side, no pain, pulse 100; respiration 24; temperature 99°. There was considerable swelling during the next three days, but no pain and no fever.

When separation and isolation have been carefully carried out, it has seemed that a milder course of the disease has

followed, at least when the health of the child was not defective.

Diagram of two mild cases of parotitis.



A little girl, five years old, was sent from home on March 14th, because her brother came from school on March 11th, with an illness which proved to be mumps; on March 28th she felt slight soreness of throat in eating her dinner; by night the right parotid was swelled and painful, temperature 99·4°. 31st.—Pulse 80; respiration 20; temperature 98·2°; and though some swelling might be noticeable for nearly a week, no subsequent febrile disturbance could be detected. A younger brother at three years, who went from home at the same time to another house, was first noticed to be amiss on April 2nd and was restless at night; 3rd, complained of throat, swelling doubtful, febrile at night; 4th, both parotids palpably affected. Pulse 120; respiration 18; temperature in recto 100·6°; axilla 99°; but neither in the mouth nor at the sides of the neck could a temperature of 99° be obtained; 7th, submaxillary slightly affected, temperature 98·4° axilla.

This child was subject to sudden rises of temperature from apparently trivial causes; he suffered severely with both measles and whooping-cough, and might have been expected to show considerable temperature disturbance in this complaint, had he not had the benefit of change of air and excellent hygienic provision. He subsequently afforded an instance of the positive lowering of temperature the day before the appearance of the eruption of varicella.

In several cases a higher temperature has been obtained at the neck or in the mouth on the side affected than in the axilla, affording a fallacious support to the idea that the general temperature, and so, inferentially, the general disease was excited by, or was a consequence of, the local lesion. The case first given, and this last case, afford strong evidence the other way. If the febrile excitement be not to a high degree, the general temperature is not always readily obtainable in the axilla; even in the last case the axillary temperature, though in excess of that in the mouth, was a degree and a half below that of the rectum; it may be generally stated that the local temperature will not be found to be in excess of, or even equal to, the general temperature, if that can be effectually obtained.

A wave of low temperature preceding the development of many of the acute specific diseases, for which priority of observation may be claimed, has been demonstrated in the early stages of measles, mumps, varicella, vaccination, and whooping-cough. This period of depression does not coincide with the chill or rigor ushering in most acute diseases, for that occurs only when a considerable elevation of temperature is already established, while this is prior to the rise of temperature excited by the progress of the disease. Up to this time it is conceivable that the poison of a disease might be thrown off harmless from the system, and the process of infection might be interrupted, but not afterwards; this puts a period to the true incubation stage, and marks the commencement of what is generally called the stage of invasion, but which ought strictly to be considered as part, and a most essential part, of the disease itself.

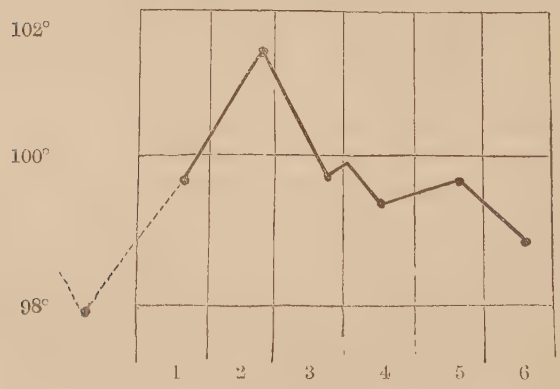
The early recognition of this stage is insisted on as of practical importance both for the safe conduct of the patient through the disease, which though now impossible to avert is more easy to manage, and also for the safety of others in guarding them against infection before it is too late.

Varicella.—In chicken-pox the rise of temperature accompanies the first appearance of the spots, and falls after the

eruption is developed though it is somewhat elevated as long as any fresh spots appear. The illness precedes the eruption by a few hours only; generally it is indicated by some papular red spots as soon as the illness is felt, and it has but once occurred to me to find any elevation of temperature without also finding indications of the eruption. Observations made during the period that intervenes between exposure to infection and the appearance of the disease have afforded no more marked result than that the positive lowering of temperature, which occurs at the commencement of most of the acute specific diseases, is here noticed on the day which precedes the more characteristic signs of the disease. Some symptoms of illness, such as pallor, and increased frequency of the pulse, may be at the same time noticeable.

The incubation period of varicella may be given as ten days; it is at least eight or nine days, as stated by Heberden; and at most, a fortnight or even seventeen days, as stated by Trousseau, may elapse from the beginning of infection to the appearance of the disease.

TABLE 5.—*Varicella.*



CASE 1.—A girl, aged 8 years, attending a day school, is seen with a characteristic spot of varicella on the upper lip, with others in the throat; she remained at home, and on the

following day there are numerous spots with nocturnal fever; the fever continued next day, and was at 101° the day after, when the earlier and more considerable spots were drying; fresh small spots continued to appear on the two following days with diminishing febrile action; six days were febrile. A brother, aged 3 years, whose case is represented in the diagram, remaining in the house and occupying the same room had the first symptoms of the illness fourteen days from its commencement with his sister, and ten from the day of greatest fever, when she remained in bed. Two other children in the family sickened on the following day.

A woman who had been assisting in a room where there was chicken-pox, spends an afternoon in the end of November with her sister, living at the distance of half a mile, who has two children at home; the younger (Case 2), a girl aged two years and eight months, was restless in the night of December 14th, she had some red spots on December 15th, and was seen by me December 16th with well-marked chicken-pox. The pulse was 180. Respiration 40 to 60 in the minute. Temperature in the axilla 101°; next day, pulse 120, respiration 30, temperature 100°, with but few new spots. On the 18th the spots were drying and there was no increase of temperature at night. On the 19th the pulse was 100, the respiration 30, the temperature 98° only.

Case 3.—A boy, aged six years and ten months, with his sister throughout, was restless in the evening of December 27th, when one spot was detected on the head; he vomited in the night. On the 28th several spots appeared; pulse 120; respiration 24; temperature 101·3°. Next day pulse 100, respiration 26, temperature 99·7°; he was able to eat a chop at dinner; there were a few new spots; one or two of these on the chest and upper arm were rounded, flat, pellucid, with drying, if not depressed centres, and some areola; all the others were very characteristic of varicella. Here, at apparently the height of the disease, there was a fall of more than a degree and a half of temperature, though the boy had been kept warm in bed. On December 30th two

new spots, full, opaque, of rounded outline, with red edges, appeared on the nates. Temperature 99·2°. December 31st, pulse 110; respiration 30; temperature 99·5°; one new spot, the last two are turbid; next day pulse 100, respiration 30, temperature 98·5°, and the disease was over.

Case 4.—A younger brother, 5 years old, out to nurse under unfavorable hygienic conditions, was sent home on January 12th on account of another child in the same room with him being ill with chicken-pox. He showed the first symptoms of lassitude on January 21st, and a few spots were seen near the mouth that evening; the next day, and the day after very numerous vesicles were developed; he had a full and characteristic eruption, but seemed so little ill that he was not kept in bed; partly owing to this, and still more to the low state of health to which he had been reduced before the illness, he suffered afterwards with most intractable sores, which were not all healed on March 2nd, when he had again to leave home, nearly six weeks after the illness.

Rubeola.—Rosalia, or epidemic roseola, is nearly allied to measles, not only by a superficial resemblance, but also by having a long incubative period, and by culminating in a speedy subsidence of temperature on the appearance of the rash. The period of incubation, as elsewhere stated,[1] is from eight to ten days; the stage of invasion is short, and, so far as it has been possible to trace the temperature-variations during the pre-eruptive period, affords another illustration of how small is the disturbance created in the system by this class of zymotic poisons, of which vaccinia is the type, until the time has arrived for their ultimate development and expulsion. This is very striking in the form of exanthem to which the name of rubeola (as distinct from morbilli or true measles) ought to be restricted. Not only has no temperature disturbance been obvious until the night preceding, or the morning of, the rash, but there has been exceeding rapidity of both the rise and fall of temperature when this has been

[1] 'British Medical Journal,' 1870, vol. i, pp. 99, 100.

much disturbed. Once it reached 102° on the first day, was 101° on the second day, and below the normal on the third, with the rash still out. Where the disturbance has been less marked, a slight elevation of temperature has been noticed a day before the rash; this reached 100° on the day of the rash, was 99·6° on the second day, and 98·7° on the third with traces of rash still on the face.

The great distinction between rubeola or rosalia and measles is the absence of the catarrhal stage of invasion; the appearance of the rash is generally closely similar. In a variety of this exanthem, having the same incubative period, the rash, instead of appearing like measles, presents a finally diffused redness which, except that on the face it has a more rosy hue, could not be discriminated by the most experienced and careful observer from the rash of scarlet fever, though differing from it absolutely as measured by temperature.

The temperature change accompanying this form of rubeola is even slighter than in the other; it precedes the rash by a few hours, and has often quite subsided when the rash is most conspicuous, so that, at the time of the greatest redness, the temperature has by evening become normal, or been found at, or even below the normal.

Another class of acute specific diseases characterised by the shortness of the incubative period and the irregularity of the subsequent temperature changes, comprises diphtheria, croup, scarlatina, relapsing fever, cholera, summer diarrhœa, influenza, and whooping-cough. Temperature-changes for the two first of these diseases have been already given;[1] the high temperature marking the course of choleraic or summer diarrhœa in infants is described in a previous paper.[2]

Scarlatina.—Scarlatina, or scarlet fever, may be taken as the type of this class. As illustrating the shortness of the incubation period, instances of twenty-four hours (Trousseau) and of less than twenty-four hours (Murchison) have been

[1] Reynolds's 'System of Medicine,' 2nd edition, 1870, vol. i, pp. 118—120, 139; also ii, pp. 79, 80, 84.

[2] 'Obstetrical Transactions,' vol. x, pp. 285—6.

ascertained; the duration of this period may extend to five days; the period of invasion is from three to thirty hours only. In scarlet fever, though the highest temperature often corresponds with the height of the rash, there is no necessary fall of temperature with the fading of the rash; and though at the height of the rash the temperature is high, and is often at its height at the end of the first week of the disease, yet with no other complication than stomatitis or coryza, it has continued at 101° and 102° up to the end of the third week.

Tables of the lowest ranges of temperature met with in undoubted cases of scarlet fever are here given for comparison with temperature variations in allied diseases: the normal range of temperature in the third case, not a mild one, is evidently controlled by the use of quinine.

TABLE 6.—*Scarlatina mitior.*

CASE 1.—Girl, æt. 2 years and 10 months.

Day of illness.	Date.	Temperature. Morning.	Evening.	Remarks.
1	March 2	...	...	Fretful, ill at night.
2	„ 3	102·0°	...	Full rash.
3	„ 4	102·0°	...	Tonsils full.
4	„ 5	100·8°	...	
5	„ 6	...	100·0° 3 p.m.	
6	„ 7	92·2°	99·0° only, at night.	
7	„ 8	Normal.		

CASE 2.—Boy, æt. 8 years.

Day of illness.	Date.	Pulse.	Resp.	Temperature. Morning.	Evening.	Remarks.
1	Dec. 8	140	30	...	102·2°	Rash on neck and chest, arch of palate red.
2	„ 9	...	...	101·2°		
3	„ 10	...	...	100·6°		
4	„ 11	...	...	100·0°		
5	„ 12	...	...	99·6°	100·0°	
6	„ 13	...	...	...	100·0°	Epistaxis.
7	„ 14	...	...	99·6°		
8	„ 15	...	...	98·4°		
9	„ 16	...	...	...	101·0°	Constipation.
10	„ 17	...	...	99·0°		
11	„ 18	...	...	98·4°	...	Some secretion from right ear, slight deafness.

Scarlatina.

CASE 1.—A boy, æt. 4 years. Temperature changes arrested by quinine.

Day of illness.	Temperature in axilla. Morning.	Evening.	Remarks.
1	...	...	Vomited at night.
2	...	102·0°	Rash on face and chest, palate red.
3	103·0°	...	Half a grain of quinine three times a day.
4	100·8°	100·4°	
5	98·6°		Stop quinine, an aperient given.
6	99·4°	100·1°	Resume quinine.
7	98·6°	99·8°	Tonsils full.
8	99·4°	...	To take iron with smaller doses of quinine.
9	...	99·0°	Castor oil given.
10	...	98·4°	Takes food well.
12	Defective vision, ciliary muscles paralysed (?), tonsils full.		
15	Improving, thick, glairy mucus at back of pharynx.		
32	Desquamation complete, some paralysis of abdominal muscles.		
38	No action of bowels since last report, convalescent.		

The following case (4), and the next but one (Case 6), show the influence of quinine and the inutility of alcohol in checking the tendency to high temperature during the course of scarlet fever.

CASE 4.—A boy, æt. 2½ years. Suffered from congestion of left lung six months before.

Day of illness.	Pulse.	Resp.	Temperature in axilla. Morning.	Evening.	Remarks.
1	...	...	...	...	Restless, rash, seemed well the day before.
2	130	35	99·4°	...	100·4° *in recto*, throat red, rash fullest over the back.
3	...	...	99·6°	...	Rash extends to legs, uvula red, sleeps well at night.
4	130	...	100·2°	...	Rash most on thighs, glairy mucus from one nostril.

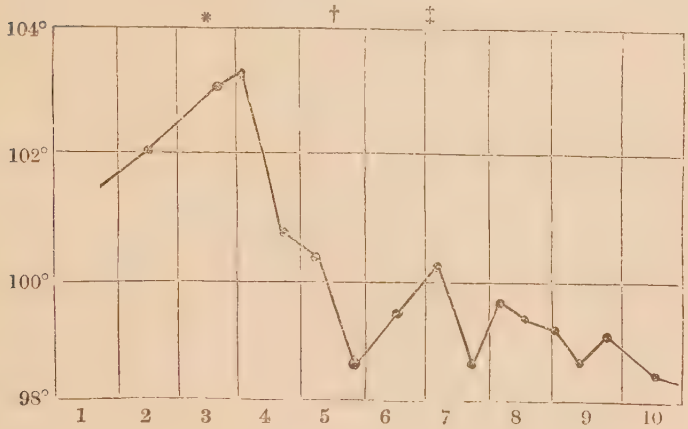
Day of illness.	Pulse.	Resp,	Temperature in axilla. Morning.	Evening.	Remarks.
5	130	30	101·0°	...	One tonsil full, eats and sleeps well, excreta natural.
6	120	30	100·2°	...	Throat better, no coryza.
7	130	30	102·2°	...	Is restless, looks pale.
8	130	40	101·6°	...	Congestion at base of left lung to be poulticed.
9	120	40	100·4°	...	Respiration audible at base, restless at night; wine given.
10	120	50	101·4°	102·0°	Enlarged cervical gland; to take quinine 1 gr. in powder.
11	120	40	98·4°	99·1°	*in recto* at 4 p. m. Slight alcoholic stimulant.
12	120	40	99·2°	101·3°	Fulness of neck on both sides, 1 gr. quinine repeated at night.
13	120	36	98·0°	...	98·5° *recto*, a little wine and water only allowed.
14	100	30	98·0°	...	Less swelling of cervical glands.
15	...	...	...	...	To take steel wine and cod liver oil.
20	100	30	97·9°	...	Seems well, swelling of neck almost gone, cervical glands still perceptible, signs of fine desquamation on hands and feet, skin otherwise clear, has not left the room.
41	120	30	...	...	Submaxillary gland still perceptibly enlarged, the bowels generally acted freely, often disturbed, urine deposited lithates, never albuminous.

This child had been kept indoors three weeks longer than necessary for his own health.

Had the pyrexia on the tenth and twelfth days not been arrested the swelling of the cervical glands would probably have then become a serious complication. The good effect of quinine, as contrasted with that of alcoholic stimulants, was at that time very obvious.

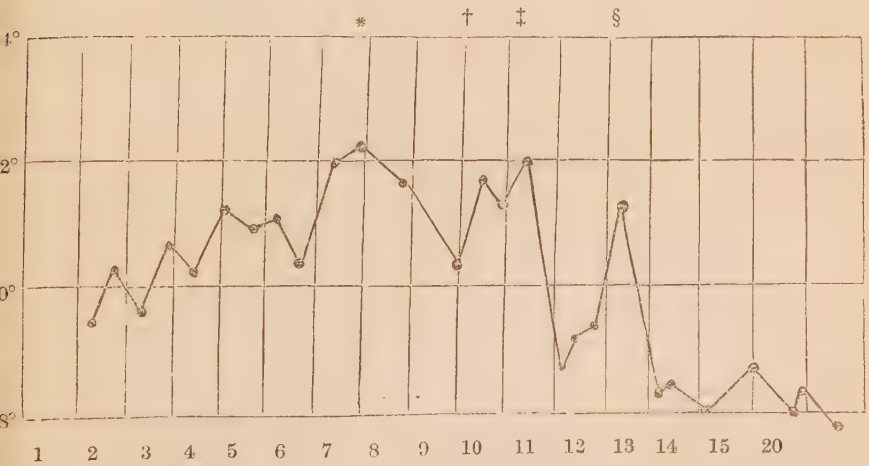
Diagrams of Scarlatina.

CASE 3.—A boy æt. 4 years.



* Quinine given, 3 grains. † Stop quinine. ‡ Resume quinine.

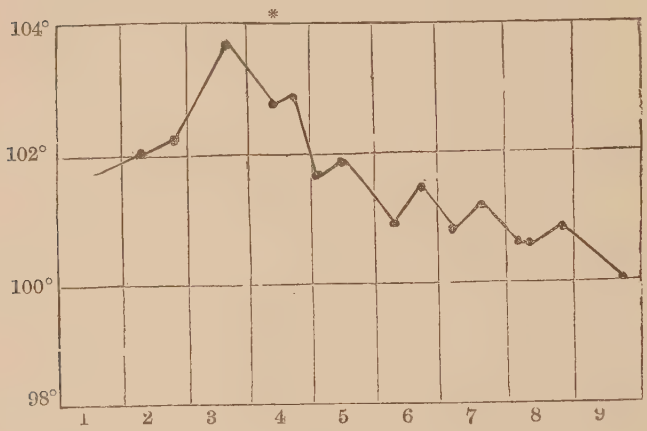
CASE 4.—A boy æt. 2½ years.



* Congestion of lung. ‡ Quinine given, one grain in powder, and repeated twice.
† Port wine given. § Resume quinine one grain at night.

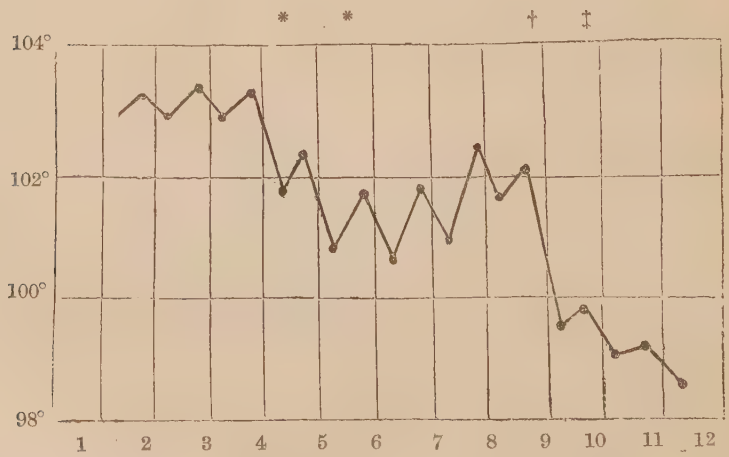
Diagrams of scarlatina.

CASE 5.—A girl æt. 3 years.



* Quinine given.

CASE 6.—A girl æt. 7 years.



* A dose of quinine at night. † Wine given.
‡ Quinine given regularly.

Table 6.—*Scarlatina.*

Case 5.—A girl, æt. 3 years. Has been hoarse, and complained of throat for four days; two sisters in the same room recovering from scarlatina.

Day of illness.	Pulse.	Resp.	Temperature in axilla. Morning.	Evening.	Remarks.
1	...	...	...	...	Vomited in the morning, fever at night.
2	140	34	102·2°	...	Full rash, palate red, temp. 101° only in the mouth.
3	180	40	...	103·6°	Sickness and diarrhœa.
4	170	40	...	102·8°	Tonsils full, throat sore; iron and quinine given.
5	160	34	101·7°		Throat better.
6	120	34	...	101·2°	Skin very red, harsh, enlarged cervical glands.
7	120	30	...	101·0°	Skin red, soft, less swelling over gland.
8	120	30	...	100·8°	Better, lips cracked and sore.

Continued to improve.

Case 6.—A girl, æt. 7 years. After complaining of the throat for a day or two is seized with vomiting.

Day of illness.	Pulse.	Resp.	Temperature. Morning.	Evening.	Remarks.
2	120	40	...	103·0°	in the mouth, probably more on surface, slight rash.
3	120	30	102·8	103·1°	102·9° at night, after a third action of the bowels.
4	110	30	102·8°	103·2°	To take acid medicine in place of saline.
5	110	30	101·8°	102·2°	A grain of quinine given at night.
6	108	26	100·8°	101·7°	Repeat quinine.
7	108	28	100·5°	101·8°	Bowels confined, no medicine.
8	108	30	101·0°	102·4°	Claret given, no action of bowels.
9	100	30	101·6°	102·1°	Bowels relieved; to take one grain of quinine, and repeat it in the morning.
10	100	25	99·4°	99·6°	Some fulness of tonsils; to take iron and quinine.
11	100	24	99·2°	99·4°	Constipation; relieved by castor oil.
22	Very free desquamation; a tendency to constipation; no albuminuria at any time.				

The effect of quinine in controlling the high temperature of scarlet fever is still more marked in a case of great severity which concludes this series. The brother of the little girl whose case is last given, had been some months in the country, detained there the last two, in consequence of his sister's attack of scarlet fever at the end of August, returns on October 9th and is put to sleep in the room in which his sister was ill, the room and the bedding had undergone a thorough purification, but the curtains which had surrounded the little girl one night only at the commencement of her illness had been put away since August 30th, after only a few days' exposure to the air, and were now hanging in alarming proximity to the face of the present patient. Four younger children, and a girl, fifteen years old, in the nursery, never having had scarlet fever, remained in the house throughout without showing any symptoms of illness; moreover, the convalescent sister had returned to them seven weeks from the commencement of her attack, but no one but this boy takes the illness.

Case 7.—A boy, æt. 8¾ years, suddenly seized on October 19th, in the evening, with headache, sore throat, and vomiting; has the rash of scarlet fever by night, with high fever and delirium.

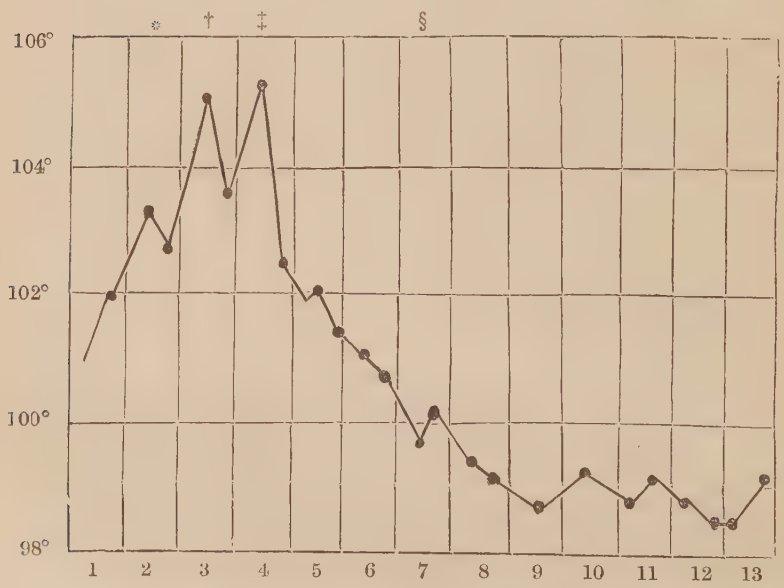
Day of illness.	Date.	Pulse.	Resp.	Temperature in axilla. Morning.	Evening.	Remarks.
1	Oct. 19	...	...	...	...	...
2	„ 20	130	46	103·2°	102·5°	Full, dusky rash, bad throat, muscular twitchings at night, and great prostration.
3	„ 21	140	48	105·0°	103·5°	One grain of quinine given at noon, not repeated at night; delirium.
4	„ 22	128	40	105·0°	102·2°	Three grains of quinine in the afternoon and two at night, with ice to the head.
5	Oct. 23	100	30	102·0°	101·2°	Slept well, quite cheerful and intelligent to-day, rash less intense, throat freer from sordes, redness of left tonsil, glands tender.

Day of illness.	Date.	Pulse.	Resp.	Temperature in axilla. Night.	Morning.	Remarks.
6	„ 24	100	28	101·0°	100·7°	Urine passed twice to-day for the first time, swelling under left ear, ulcer of left tonsil, red swelling of soft palate, exudation on uvula.
7	„ 25	92	26	99·7°	100 1°	Petechiæ on neck and chest, restlessness last night extreme; to commence wine and take steel with the quinine.
8	„ 26	80	28	99·4°	99·0°	Slept well, throat clearing, ulcer healed, much less swelling of glands.
9	„ 27	80	24	98·7°		Takes solid food and wine; stop quinine.
10	„ 28	88	26	99·1°		To resume one grain of quinine twice a day with steel.
11	„ 29	80	24	98·8°	99·1°	Urine free, with excess of phosphates, no albumen.
12	„ 30	76	22	98·8°	98·6°	Fine desquamation on chest.
13	„ 31	72	22	98·6°	99·1°	Tendency to constipation; discontinue steel.
15	Nov. 2	88	26	99·5°		Uric acid; to take less wine.
21	„ 8	84	24	...	99·1°	Desquamation everywhere.
25	„ 12	84	...	98·7°	...	Slight fulness of cervical gland remains.
34	„ 21	84	26	99·1°		Some fulness of tonsils; to go out.

Here the intensity of the disease necessitated a large quantity of quinine, which did not cause either deafness or other inconvenience; quinine seems to control any tendency to vascular or other excitement that might be occasioned by the free use of wine; this is traceable both on the seventh and tenth days. The most marked benefit from it is seen at the very height of the fever, when, the general pyrexia being under its control, the heat of head and restlessness at night were readily subdued by the application of ice, and good sleep followed. Next day the intelligence, cheerfulness, and perfect memory displayed make it impossible to suppose that any cerebral congestion had resulted from the remedy, or any cerebral injury from the pyrexia. In reducing the high

temperature on which the chief danger, not only to life, but to the integrity of the tissues, in these diseases, depends, quinine is as powerful a remedy as cold affusion, and is much more convenient and serviceable; it is nearly as efficacious in typhoid fever, when, the pyrexial period being more prolonged, the cerebral disturbance is greater. How much of this might have been prevented by its use in cases that come to mind. Once in a child convalescent from typhoid fever loss of memory was so complete that whole weeks remained a blank. Cinchonine has a similar influence, as is illustrated in a case of typhoid fever given at the end of this paper. The effect of quinine in scarlet fever is seen in this diagram of the case under consideration.

Diagram of scarlet fever influenced by quinine.



* Muscular twitchings, great prostration. † One grain of quinine only given.
‡ Three grains of quinine given and repeated.
§ Wine commenced and given freely next day.

Six grains of quinine in one day and three grains on subsequent days sufficed here; from fifteen to forty grains are often requisite in older persons; the latter quantity has been given in one night with most marked benefit to a boy of sixteen, where fever from another cause was running high. Scarlet fever in the puerperal state requires the largest doses in combination with the stronger forms of iron. Albuminuria has rarely followed in the cases of scarlet fever that have been selected for careful observation, and never as yet, it is worthy of remark, in those treated by quinine. In this case the ingress of the disease was as sudden as it is possible to be; the child was observed at 2 o'clock in the afternoon to be, seemingly, in the most robust health, and by six in the evening he was obviously ill with a severe attack of scarlet fever.

Whether this is from his sister or from the curtains under which he slept (though in neither case need the germ have been imparted long before) the cause of infection must be considered as acting continuously, and the effect is not produced until ten days from first exposure.

The communication of scarlet fever from one person to another in the same household, even where there are several children, is generally preventible. To effect this the general requirements are a separate room for the sick, bared as much as possible of furniture; a sheet or linen curtain, on which disinfectants can be sprinkled, suspended over the door, and the removal of any carpet or rug from the outside of the door of the sick room; strict cleanliness within the room, the immersion in water containing a disinfectant of whatever has to be removed from the room; an intelligent attendant, and a sufficiently prolonged isolation of the patient. Olive oil containing one twentieth part of carbolic acid, applied to the skin, is useful; in the earlier part of the illness it is grateful to the patient, in the latter part it obviates some of the dangers attending desquamation. Several instances where families of six or seven children all remaining in the house have escaped, while one of the number was going through an attack, have come under notice. Even where, in a family of

three children with but a single sleeping room, part of it only could be set apart for the treatment of a child seized with scarlet fever, the intelligent application of these principles secured the immunity of the others. So true is it that disinfection, to be real, must begin at the bodies of the sick.

The great difficulty in checking the diffusion of scarlet fever is the uncertainty as to when the infectious period of the disease is over. Six weeks must be taken as the least time allowable for the persistence of personal infection. The way in which clothes may retain infection particles is easily understood, and may be readily guarded against. The disinfecting of the house is a more difficult problem; chief dependence must always be placed upon the care taken to meet every cause of infection at its source. Afterwards liberating fumes of sulphurous acid, by sprinkling sulphur on some live coals properly placed, is of use; a thorough cleansing of the room is necessary, also the free admission of air; even then time must aid to free the roof from all taint.

To arrest the spread of scarlet fever at the outset presents a less difficult problem than to limit its extension afterwards. The marked character of the earliest symptoms, the suddenness of the invasion, and the shortness of the incubative period, all tend to favour the success of an immediate segregation of the sick. It is to be remarked how often those escape who are removed from contact with the sick during the first two days of the disease, and how sometimes a short contact with a convalescent has been rapidly followed by symptoms of the illness. The quarantine necessary to those who have been exposed to infection—to perform a quarantine that may guard against their becoming agents in disseminating scarlet fever—is not very protracted; evidence of the shortness of the incubation period is conclusive; this, indeed, can hardly be admitted to extend, even at its longest, to five days, so that generally a week will show whether any one so exposed has taken the disease or not. A difference of result may be looked for where there is continuous exposure to the source of infection to where there is complete removal from it; under the first circumstance four or five days of slight sore throat or pre-

cedent hoarseness have been occasionally met with. Some difference, also, is to be expected where the removal of the infecting causes has been prompt and where it has been delayed. In the latter case eight days has, under my own observation, been the longest interval from exposure to sickening, isolation being as complete as possible; in the former case the probabilities are that either the patient will either escape altogether or be seized in a much shorter time. A period of hours only has in some instances sufficed for the development of the disease, so that when so long a time as five days is given for incubation,[1] we must conclude either that there has been some hindrance to the passage of germs from the lungs to the blood, or that the first portions absorbed must have been thrown off harmless; at the same time, when a period so long as even twelve days has been given by some writers as a possible one in which the disease might appear, this interval would not be too long for observing a quarantine that might check the spread of so dread a pest.

Influenza, though rarely exanthematous, and liable to recurrence, has alliances with scarlet fever, chiefly in the rapid development of its early stages, and somewhat in its after course, whether that take the form of the herpetic catarrh of spring, the diarrhœa of summer, or the bronchitis of winter.

Hooping-cough, which, but for a doubtful turgescence of skin and the petechial spots sometimes met with, would not be exanthematous at all, has some affinities with this class of disease. It is with difficulty distinguished at the outset from influenza; both, at first, alike depress most seriously the weakest and youngest, yet the more marked consequences of the one and its much longer course render an early recogni-

[1] The evidence as to the infection of relapsing fever is the other way. Exactly five days elapsed from complete removal from the sources of infection to the appearance of the disease in an unexceptionable instance; a doubt as to the other sources of infection must attach to the cases from Camberwell workhouse, where the passing one night in infected wards was followed by the appearance of symptoms of the fever in the morning.

tion desirable. Some essential differences should not be wanting to the early stages of a disease differing so widely in its after course as this one does from influenza, in that it is almost always exempt from recurrence.

This difference is found in the pyrexial period of the early stage of the disease, being sometimes more intense, and always more prolonged, in hooping-cough than in influenza, and in the incubative period of hooping-cough being much longer. Again, there is this point common to them, which occurs also in other diseases, that on the establishment of the local process the general temperature shows a tendency to decline.

Influenza seems to be immediately infectious, and twice it has occurred to me to meet with the first symptoms before elevation of temperature had set in. In one instance there was altered voice and a visibly red epiglottis; in the other, to be presently tabulated, sneezing and slight diarrhœa. In the slighter cases the pyrexial period may be a few hours only, secretion is readily established, and the temperature rapidly declines.

To take, in the first place, simple cases of influenza catarrh. An infant, a boy of three years, and a girl of one and a quarter, come from the country on April 10th to a house where the servants in charge had influenza colds. The little girl has diarrhœa on April 14th; on the 15th there is slight coryza and the first elevation of temperature; on the 16th some harshness of respiration, with a temperature of 100° axillâ; 17th, temperature normal, much defluction from nose; 18th, temperature 97·6° axillâ, and only 98·6° recto. The little boy was well on April 16th; on the 17th was hot and restless, had spots of herpes on the arm in the evening, and coughed in the night; 18th, temperature 99° axillâ, perspiring after a midday sleep; 19th, cold in the head, temperature normal. The infant, who was more restricted to the nursery, while the elder children went into other parts of the house, coughed at night on April 20th; on the 21st had signs of catarrh but was not kept to the house, the weather being hot and the catarrhal symptoms trivial.

In cold weather more serious disturbance is to be apprehended. On January 21st a boy, two and a half years old, is feverish at night and has croupy cough. 22nd, harsh cough; slight difficulty of swallowing; glandulæ concatenatæ palpable; pulse 160; respiration 40; temperature 101°. 23rd, loose rhonchi in larger bronchi; pulse 160; respiration 40; temperature 99·6°. Next day, pulse 100; respiration 30; temperature normal; some loose cough.

In the nursery with this child is an infant-brother three and a half months old, who, not having been out, was noticed to sneeze on January 23rd. Observations made at the very commencement are given in the following table.

TABLE 6.—*Pneumonia.*

CASE 1.—

Day of illness.	Date.	Pulse.	Resp.	Temperature in recto. Morning.	Evening.	Remarks.
1	Jan. 23	120	40	...	98·8°	Below the normal for this child.
2	„ 24	135	50	....	101·4°	Cough, harsh respiration, bowels relaxed.
3	„ 25	130	60	101·7°	...	Kept awake by incessant cough, high-pitched rhonchi at scapulæ.
4	„ 26	160	70	102·6°	...	Dulness at left base and diminished expansion.
5	„ 27	180	...	102·4°	103·0°	Crepitation.
6	„ 28	160	60	101·0°	102·3°	Secretion commencing.
7	„ 29	140	60	100·5°	101·0°	Large loose râles, dulness at left base.
14	Feb. 5	...	...	99·2°	...	Expansion good, lungs healthy, some consonant râles heard in large bronchi.

The next table also indicates pulmonary complication. A girl, aged four years and two months, sleeps in the same room with an elder sister, who came home from school with bronchial catarrh on December 11th, 1868. It was noticed at night how quick was the breathing of the one girl and how quiet that of the other. The next morning, at 5·30 a.m.,

a change was remarked in the younger girl; by 7 a.m. there was rapid breathing, afterwards coryza and some fever, though she was cheerful in the afternoon. Throughout the next day it was evident she had a severe cold.

TABLE 7.—*Pneumonia.*

CASE 2.—

Day of illness.	Date.	Pulse.	Resp.	Temperature. Morning.	Temperature. Evening.	Remarks.
1	Dec. 14	140	60	101·0°	...	Congestion of left base.
2	„ 15	160	60	100·5°	...	Pallid, alæ nasi work.
„	„ „	140	70	...	100 6°	Crepitation at base.
3	„ 16	140	70	103·0°	100·1°	Rusty sputa.
4	„ 17	140	60	100·5°	...	Better.
5	„ 18	140	50	98·4°	...	Loose râles everywhere, aphthæ in mouth. Ultimate recovery perfect.

The eldest sister had a temperature of 101° in the evening of December 11th; next day, though she had some congestion of left lung, with mucous rhonchus and great acceleration both of pulse and respiration, the temperature was lower; and on the fourth day, with abundant sonorous râles, the pulse was 120, respiration 40, temperature normal.

Two other children of this family on December 13th and 14th were similarly attacked. In another nursery of four children an elder sister comes home from a day school with cough on December 8th; on December 10th the younger sister, two years old, has a similar cough; on December 13th a stout florid boy of three and a half years, who has once had croup, becomes suddenly febrile, and at night has a temperature of 101°; his breathing is rapid, both inspiration and expiration prolonged; diffused râles; cough.

Day of illness.	Date.	Pulse.	Resp.	Temperature.	Remarks.
2	Dec. 14	140	50	101·5°	
3	„ 15	120	40	99·5°	Râles, most at left base.
4	„ 16	110	40	98·0°	Loose sonorous râles everywhere.
5	„ 17	160	40	100·8°	Excitable, râles almost gone.
6	„ 18	120	35	98·0°	Râles have returned.
7	„ 19	Nearly well.		Respiration slightly harsh.	

Here were two nurseries of young children all ill together with this contagious catarrh, and in both these nurseries the nurses became affected with herpetic sore throat, coming on with intense aching of back and limbs, and resulting in the formation of several small ulcers on the tonsils in one case, and a larger, round, yellow ulcer of one tonsil in the other. In both there was a temperature of 102° on the second day, with complete defervescence on the third, though the throat, edge of palate, and back of pharynx continued to be red.

The herpetic variety of this form of catarrh is not unfrequent, and may be considered as the sporadic form of influenza;[1] it comes on after one day of chilliness or pain, has one or at most two days of pyrexia, which subsides often most completely on the third day, requiring, however, but slight variations in the circumstances of its occurrence to be prolonged with various complications. In children it is frequently followed by ecthyma, and so great is the tendency of infectious diseases, not only to propagate their kind, but even their individual peculiarities, that several children of a family will often be seen with ecthymatous pustules on their faces or fingers, resulting from influenza colds, and appearing so nearly together as to give rise to the idea of the exudation itself having contagious properties, while, in reality, they have resulted from a common infection acting on a common predisposition. There are other complications, however, of far more importance, and excluding the modifications of this influence mentioned at the commencement of the section, and certain distinct and separable forms of it, capable themselves of acquiring epidemic influence; yet neuralgia, rheumatism, quinsy, gastric catarrh, diarrhœa, dysentery, bronchitis, and pneumonia frequently result so directly, and the number of unplaced phenomena bearing upon the subject is so great, as to make one conclude that there is no such thing as idiopathic inflammation at all, and that the history of "common cold" has yet to be written.

In the following instances of high temperature associated with influenza the influence of a diathesis is obvious.

[1] Dawson, p. 5.

Case 1.—A boy, æt. 5 years and 4 months, has suffered, together with three older and two younger children in the family, from influenza colds, with herpetic and impetiginous spots chiefly on the face; this child has ecthyma of one finger extending to the nail, the remains of some eruption at the right angle of the mouth, and a sore at the edge of the right nostril, obstructing it. He has suffered much from illness; he had croup as an infant, subsequently some meningeal affection, and is slightly hydrocephalic; most of the teeth are decayed, but he is lively and well grown; frequently stumbles in his walk. During the past week's illness he has passed water involuntarily at night, and has been nervous and frightened in the day; he has complained of pain in the head, and has frequently squinted. February 21st, was sick in the night, and has had no relief from the bowels. At 2 p.m. the pulse was 140; respiration 44 in the minute; temperature in the axilla 103°; pain complained of behind both ears; no otitis; glands of the neck are perceptibly enlarged. At 4 p.m. he was relieved by black vomit, and afterwards by similar matter from the bowels; a small dose of calomel was given; he afterwards slept well. Next day, February 22nd, the temperature in the axilla was 100°, and the day after 99°; there were streaks of mucus at the back of the pharynx; the head symptoms, at first pronounced to be secondary, had entirely disappeared. The bowels showed a tendency to constipation till the 26th, when there was restlessness at night and involuntary micturition. On the 27th the action of the bowels was normal, but the urine contained uric acid, which largely deposited on the 28th.

March 2nd.—Pulse 100; respiration 26; temperature, axilla, 98·8°. Nostril healed; angle of mouth sore; back of pharynx red, streaks of mucus on it; appetite better; a dessert-spoonful of wine at dinner makes him excitable and prevents him walking steadily; to discontinue it, and take syrup of iodide of iron. The nurse had ulcerated sore throat on February 22nd, and herpes of lip on 24th; in the next case a servant has herpes of the lip, and the illness of the child follows.

CASE 2.—A boy, æt. 7, subject to sudden febrile attacks accompanying acute enlargement of tonsils; has had a pustular spot on one cheek for a few days. A servant in the house had herpetic catarrh a week before.

Day of illness.	Date.	Pulse.	Resp.	Temp.	Remarks.
	Mar. 22				Woke early in the night with a croupy cry, hot and restless afterwards.
1	„ 23				Both tonsils large, smooth, left slightly red, glands on left side of neck palpable, temp. axilla 103·0°; tincture of steel given.
2	„ 24	120	30	101·0°	Throat red, no specks on tonsils, viscid defluxion per nostrils.
3	„ 25	112	28	99·4°	Tongue clean, tonsils paler, still full, a small pustule on neck.
4	„ 26	100	20	98·8°	Acrid discharge from nose, sleeps well.

The following case is as much like quinsy as possible in a child so young.

CASE 3.—A girl, æt. 4½, complained of fatigue and loss of appetite on April 26th. Wine given at night; great fever and restlessness afterwards.

Day of illness.	Date.	Pulse.	Resp.	Temp.	Remarks.
1	April 27	...	...	Burning heat.	Vomited; an aperient caused one very dark evacuation.
2	„ 28	144	48	103·0°	Face and arms red, tonsils full with white specks.
3	„ 29	120	30	102·2°	Tonsils enormously distended, glands of neck hardly perceptible.
4	„ 30	110	25	99·1°	Appetite returning, fulness of tonsils has subsided, but they meet, the specks have red edges, uric acid in urine.
5	May 1				Improving; rapid subsidence of tonsils.

As an illustration of bronchial catarrh in which the temperature falls as secretion is established may be mentioned

the case of a boy, æt. 5, attending a day school, who has slight signs of cold on May 19th, with relaxation of the bowels. On the 20th he is flushed and excitable in the evening, very hot in the night, and disturbed with noisy breathing; pulse 140; respiration 32; temperature 102·8 in the axilla. Next day the respiratory sounds are weak, the fever rather less; salines and rest in bed are prescribed. On the 22nd there are increased signs of bronchial irritation and less fever. On the 24th free bronchial secretion; temperature 97·4 in the axilla.

Case 4.—*Gastric catarrh; sudden fall of three degrees in temperature after purgation.*—A boy, æt. 3, of rapid growth, thirty-eight and a half inches high (he was thirty-six inches in June last, and thirty-seven and a half in October, so has not grown so rapidly of late). Has a slight cold on February 19th; next day, weather being very cold, he is out long and late, and complains of pain in stomach and limbs.

Day of illness.	Date.	Pulse.	Resp.	Temperature. Morning.	Temperature. Evening.	Remarks.
1	Feb. 20	...	...	...	...	Cough at night and diarrhœa.
2	„ 21	130	30	...	102·0°	Headache, rigors, talks in sleep.
3	„ 22	120	30	101·0°	101·4°	Pain in stomach, no cough.
4	„ 23	140	40	102·5°		Tongue furred, yawns, mouth twitches; calomel ⅔ grain given.
5	„ 24	110	30	99·4°		Bowels three times acted on last night.
7	„ 26	100	26	Non-febrile.		One natural action of bowels.
14	March 5	A sister has cold and sore throat; also a servant, who also has herpetic spots.				

The weather became suddenly mild on February 20th, with a half-inch fall of the barometer, when the following case of bronchial catarrh was observed.

Case 5.—A boy, æt. 2, still at the breast, the canine teeth not cut, has heat of head on the 21st, cough on the 22nd, coryza on the 23rd, first seen by me on the 24th.

Day of illness.	Date.	Pulse.	Resp.	Temperature.	Remarks.
4	Feb. 24	120	40	100·0° recto.	Sonorous rhonchi at back of chest, sordes on gums, had been purged by calomel.
5	„ 25	120	46	100·6° „	Gums lanced, great irritability, no coryza.
6	„ 26	120	40	100·4° „	Loose cough.
8	„ 28	120	30	100·0° „	Bronchial râles, coryza.
9	March 1	130	40	101·2° „	Harsh respiration with moist râles, excitable at night.

Improvement followed upon an improved diet.

Lancing the gums in this case had no influence on the temperature changes, and the calomel purge at the commencement was injurious. In the following case, occurring in hot weather, the febrile disturbance was neither made shorter nor less by the early use of calomel; moreover, though one of the last two molar teeth was not quite above the gum and the other quite under, they were not interfered with, and the temperature crisis, as in the first of these cases, was determined by a copious deposit of uric acid.

Case 6.—A girl, æt. 2½, well grown, and in apparent health, travels by railway to the seaside on August 14th, the weather being hot, with a cold wind. The bowels are twice disturbed on the evening of arrival. The next day she is out much in the wind, and becomes feverish at night, and is of a burning heat in the morning, when a dose of calomel is given; both vomiting and purging were induced, the fever at night was no less, and next day, August 17th, two doses of calomel were given, and a warm bath at night.

Day of illness.	Date.	Pulse.	Resp.	Temperature in axilla. Morning.	Evening.	Remarks.
3	Aug. 17	...	...	...	103·0°	Frequent disturbance of bowels.
4	„ 18	140	40	102·3°	102·3°	Mucous purging, dry tongue, husky cough.
5	„ 19	130	40	102·0°	102·5°	Urine scanty, bowels free, skin moist.

Day of illness.	Date.	Pulse.	Resp.	Temperature. Morning. Evening.	Remarks.
6	Aug. 20	116	25	97·2°	Slept well, urine very free, with large deposit of uric-acid crystals.
8	„ 22	No return of fever, action of bowels slight and of light colour, almost white on the 24th, natural by the 26th.			

A round worm was voided by this child early in the November following.

Salivation from Steadman's teething powders.

A girl, æt. 2, has a cold, and is thought to be ill from teething, the last four molars not being through. The above powders, calomel and opium, are given frequently.

Date.	Temperature.	Remarks.
April 3	102°	Gums swelled nearly to the level of the teeth.
„ 4	101°	Mouth less sore, gums and cervical glands swelled.
„ 7	99°	Mouth well, health improving.

Last molars are not nearly so forward as might have been expected from the case of early dentition with this child; unfortunately these powders were commenced during some disturbance with the appearance of the canine teeth some months since; by frequent repetition they had caused the usual arrest of development until the elimination of the poison was at length attempted.

Continuous elevation of temperature accompanying an eruption on the face and body.

A boy, æt. 3½, strong and healthy, but subject to sudden febrile attacks. After a cold has an eruption extending from the upper lip to the right cheek, which is swollen. When the child was first seen, on April 8th, these spots had become pustular, but numerous raised spots, minutely vesicular (the spots on the cheek said to be like these at first), appear on the chest, abdomen, inner part of arms, outer part of thighs, and on the hips; the temperature of the mouth inside the right cheek is 100·3°. On April 11th it is 100·5°; pustules have appeared on the eyebrows, the spots on the hips

are pustular, on one finger the cuticle is raised by a pustular secretion. April 13th.—Some spots are drying, others extending; temperature in the mouth 101·8°; in the axilla 101·5°; a new but less purulent bulla on finger, the first is well. The child does not appear to be ill; some of the places are irritable at night; those on the body extend in a somewhat circinate manner. April 16th.—All the places are better; purulent crusts are formed on the head; dry, raised crusts on some parts of the body; the face and lips clear; temperature in the mouth 99°, in the axilla 99·5°. April 25th.—Face quite clear; temperature in the mouth 97° only could be obtained; in the axilla still 99°·5. There are one or two recent spots on the shoulder, rounded, smaller, drying in the centre; on the dorsum of the foot is a circinate crop of similar spots. Child nearly well. Very little treatment beyond the bath was used; occasionally a mild aperient was required. The year before, on February 25th, the other children in the family having contagious colds, and this child having slight symptoms on the 23rd, has one of the short febrile attacks not unfrequent with him. He slept all day, ate nothing; temperature, axilla, at 5 p.m. 102·5°. He roused up before night, ate, and slept well; had no medicine, and next day, at 5 p.m., the temperature was 99·4°; small glands perceptible in neck. March 1st.—Pulse 112; respiration 28; temperature 99·4°; tone of voice indicative of cold. Some months previously the pulse was 100; the respiration 22 only when in health.

Tuberculosis checked by quinine.

A boy, æt. 12, height fifty-one inches, after a cold in the spring, has loss of flesh and some chest affection with deficient expansion of the left apex on April 28th, when the pulse is 120, respiration 30, and the temperature 98·4° in the axilla. On May 2nd, though there is perspiration, shortness of breath, pallor, and loss of appetite, the pulse is 80, respiration 28, and the temperature in the axilla only 98·2° at night. Country air and cod-liver oil did some good. In August the

pulse and breathing were again quick, and the axillary temperature was 99·1° at noon. Change of air now did no good, and in November the day temperature was generally 99°, and the night temperature 101·5° to 102°. All that rest, early hours, wine, and food could do did not check the evening hectic. On December 6th three grains of quinine, and on the 7th five grains, entirely prevented the night exacerbation, and the boy is now strong and stout.

Hooping-cough gives rise to a remarkable series of temperature-variations. The whole of what in my first paper (Vol. X) is called the incubation period is pyrexial, often to a high degree, and is therefore always an important and sometimes a serious part of the disease. This generally occupies the first week of the illness, and as the characteristic hoop is then very uncertain in its appearance, a longer time often elapses before the presence of the disease is recognised. Hooping-cough, like scarlet fever, may be either immediately infectious, or not appear till after an interval of more or less freedom from ailment, with this difference, that while in scarlet fever, if there is no appearance of rash by the eighth day after exposure to infection, there is a fair presumption of immunity, in hooping-cough seven days is probably the shortest limit of the period in which to expect the more obvious evidences of the disease to be developed.[1] During this period of invasion there is a marked and often progressive elevation of temperature, in itself sufficient to differentiate hooping-cough from the slighter forms of influenza, and sometimes, as in the following case, so out of proportion to the local lesion present as to necessitate the inference of a zymotic cause.

[1] In one case a boy exposed both to measles and hooping-cough at a day school is first taken ill with measles, and afterwards the symptoms of hooping-cough appear; this might either be evidence of the longer incubation period of hooping-cough, or only of the less intensity of its invasion stage, and of the prepotency of measles. All the other children in the family had measles first and hooping-cough after, this being the order in which they were exposed to infection.

TABLE 8.—*Hooping-cough.*

CASE 1.—A delicate girl, æt. 1, whose sisters are at school, and have a cough suspiciously like hooping-cough, wakes up febrile after a few hours' sleep, at 8 p.m., April 4th, 1869.

Next morning she seemed well, but was again hot in the evening; after a sleep on the 6th there was constipation; on the 7th, thirst, and no appetite.

Date.	Pulse.	Resp.	Temperature.	Remarks.
April 7	200	80	105·3° recto.	Dyspnœa.
„ 8	140	50	101·0° „	Congestion of right base.
„ 9	180	60	103·6° „	Crepitation.
„ 10	140	70	98·5° „	Loose râles.

On the 14th hooping-cough well marked, as also in four others of the family who had been ailing most of this time. On April 28th this child again has disturbed breathing, and deficient expansion of right base; on 29th dyspnœa; defective respiration below scapula; râles everywhere; crepitation at base of lungs; convulsions; pupils somewhat dilated, but act to light; fontanelle depressed; pulse 150; respiration 60; temperature 102·5°. On the 30th convulsions through the night; pupils inactive; temperature 103·2°; alæ nasi compressed in inspiration; death at 6 p.m. A remarkable fall of temperature accompanied the establishment of the local process in the lung on the seventh day; that the high temperature preceding this was not due to the lung complication, but part of the general disease, and analogous to what takes place in the early stages of all the exanthemata, is not only the most likely supposition from the facts of the case itself, but is made evident from the case in accompanying table.

CASE 2.—A boy, æt. 4½, exposed to hooping-cough for ten days or a fortnight, is found, after slight symptoms of illness, to be febrile on March 18th.

Day of illness.	Date.	Pulse.	Resp.	Temp.	Remarks.
2	March 18	100	...	99·4° axilla.	Pulse full and jerking; to remain in doors.
3	„ 19	...	...	99·6° „	Coughed in the night.
4	„ 20	120	28	100·4° „	Seems dull and heavy; some loose cough, and wheezing heard.
5	„ 21	120	24	99·8° „	Face flushed; loose râles in larger bronchial tubes.
7	„ 23	108	22	99·2° „	Sick before dinner, no appetite, the wheezing has gone, earache at night.
8	„ 24	130	...	102·0° „	Generally worse, not much cough; lips full, dry and red, face flushed; high fever in the night.
9	„ 25	140	40	103·4° „	Tongue white; worse at night delirious.
10	„ 26	140	40	103·0° „	No râles nor defective respiration, perspired a little in the night; bowels and urine free, no chest complication.
11	„ 27	140	40	103·8° noon.	Three grains of quinine given; the affusion reduced the temperature to 101·3°, and after a second dose it was 100·8°.
„	By 8 p.m.	110	30	101·3° recto.	Only 108·8° in axilla, a fall of three degrees in eight hours from 1½ grs. of quinine, or a fall of four and a half degrees of temperature in one day.
„	At night	100	30	100·8° axilla.	
12	„ 28	100	26	99·3° „	Moist rhonchi on deep inspiration.
13	„ 29	108	30	99·6° „	Respiration weak and irregular in rhythm, frequent cough, deafness, rhonchi on expiration.
14	„ 30	100	26	99·1° „	Earache.
16	April 1	100	26	99·4° „	Inspiration prolonged; no rhonchi.

Day of illness.	Date.	Pulse.	Resp.	Temp.	Remarks.
19	April 4	100	30	98·6°	Coughs but little, is weak and thin.
21	„ 6	100	26	99·2°	Constipation; takes cod liver oil.
24	„ 9	100	20	99·5°	Regaining flesh, is easily tired.
34	„ 19	88	22	99·0°	at end of six weeks. Better; to go out.

The high temperature from the eighth, ninth, and tenth days of the illness was not owing to any chest complication nor to otitis; the ears were examined, and there was no deafness on either of those days. On the morning of the eleventh day the child was removed from the room, where the infant was suffering some of the worst effects of the disease, and two drachms of brandy given with no good effect. The quinine was not given until 2 p.m. An hour afterwards the pulse was much quieter, and reduced twenty beats in the minute. The child seemed roused from the lethargy of the previous two days, and wished to be read to; it was then noticed that some degree of deafness existed, and the voice had to be raised in reading to him. Two hours after he felt hungry, eat, and the sordes cleared from the lips. After the second dose of quinine he seemed more deaf, and fell asleep, the pulse then being only 100 in the minute, and the temperature had fallen three degrees, the greatest care being taken that this was obtained with absolute accuracy. The bowels were relieved naturally next morning, and the cough resumed its ordinary characters; the deafness had not quite disappeared before the second attack of earache.

This boy was not seen till March 18th, when he was dressed for going out, and was said to be quite well; but the quick, jerking pulse and elevated temperature showed the necessity for immediate rest and precaution. It is probable that his illness commenced at the same time as that of his two elder sisters, whose cases follow, and that the greater severity and continuance of the early stage of it, is chiefly owing to his greater exposure to the source of infection. The high degree of temperature maintained at the commencement of the second stage of accession is evidently controlled by quinine.

The other children in this family were three girls, the youngest, a year and a half old, has a cough in February, attributed to teething. She was said not to be febrile, and was taken out daily till the beginning of March, when, the weather being cold, she was kept at home, and was consequently more with the other children. The boy was the only one who slept on the nursery floor, and he was in the same room. On March 8th the infant's cough, besides being spasmodic, was attended with some thin phlegm, which had not accompanied the former cough. On the 15th the child was seen with all the characteristics of hooping-cough.

On examining the sisters, the elder (Case 3), seven years old, apparently quite well, had a temperature below the normal; she sneezed at night, next day was fretful; pulse 100; respiration 26; temperature 98·6° axilla. March 18th.—Seems heavy, easily tires and cries, tongue pale, glandulæ concatenatæ a little enlarged; slight, irritable cough, quick pulse; temperature 100·4° in the axilla. Next day more cough, glands of neck considerably enlarged; still febrile. 21st.—Cervical glands less in size, pulse quiek; she is still febrile, but emotional, so that the temperature is not exactly ascertained. March 23rd.—Lively, good appetite, loose cough, glands of neck have subsided, temperature normal. The cough was not severe; it caused the face to redden, and continued for three weeks.

The younger sister (Case 4), three years and four months of age, had the first depression of temperature on March 16th, when she looked pallid, but did not feel ill. Next day the appetite was bad, the respiration shallow. The illness had commenced, and furnished the following observations:

Day of illness.	Date.	Pulse.	Resp.	Temperature. Noon.	Temperature. Evening.	Remarks.
3	March 18	120	28	...	100·6°	Tongue white, no cough, small glands in neck.
4	„ 19	104	...	...	99·4°	Pallid, eyes heavy, short breath.
5	„ 20	120	26	101·0° [1]		Râles developed on deep inspiration.

[1] Evidently not influenza; or the temperature would have fallen, or some more marked local effect have appeared ere this.

Day of illness.	Date.	Pulse.	Resp.	Temperature. Noon.	Temperature. Evening.	Remarks.
6	March 21	130	26	100·4°		Sonorous rhonchus; tongue white; lips dry, swelled.
7	„ 22	110	28	99·2°		Loose sonorous rhonchus seems ill, dull and heavy.
8	„ 23	112	...	...	98·0°	Pallid, coryza, eyelids swollen, better.
9	„ 24	108	28	...	...	Seems weak and languid, had earache in the night, and spasmodic cough; relieved by morphia.
10	„ 25	120	30	...	99·0°	Whoops with the cough, and wheezes.
11	„ 26	110	26	98·6°		Tongue clean, good appetite, cheerful.
13	„ 28	120	20	98·4°		Loose râles, better.
15	„ 30	104	26	98·5°		Râles developed on deep inspiration.
21	April 6	100	22	98·6°		Seems nearly well, coughs night and morning.
24	„ 9	...	...	99·2°		Is not disturbed at night; has a slight fit of coughing, with loose phlegm, in the morning; is taking cod liver oil, which, perhaps, increases the temperature.
45	„ 30	...	...	99·4°		Eyes redden on coughing, white mucus at back of pharynx.

The infant, Case 5, after nearly a fortnight's illness and a week's cough, whooped with it on March 13th. On the 18th the paroxysms were of great violence, and there was much secretion. An emetic with antimony in the night afforded some relief, but was followed by an increase of illness. Next day the face became almost black in the spasms of cough; in the interval air entered the lungs freely everywhere. The temperature at this time was 99·8°; on the 21st, 99·6°; 24th, 99°, with loose râles. On the 26th morphia in minute doses had diminished the expectoration, but was discontinued because of some crepitant râles at the left base, and a poultice was applied; at the same time the temperature was only 99·2°.

On the 27th the temperature was 98·2°; the pulse was 120 in the minute; the respiration 36, and much freer. A combination of atropine and morphia, one sixth of a grain of each in sugar powders, was now used with most marked good effect, not only in moderating the spasm, but, at the same time in lessening the amount of the thin, acrid secretion. On visiting the child at night the pulse was 88, the respiration 30, the temperature *in recto* 98·7°, and on the surface not above the normal. On April 7th the cough and secretion were both increased by going out of doors; the temperature was 99·2°. On May 4th the cough was not lost, though there was but little expectoration; the temperature *in recto* was 99·4°. The eye teeth were near the gum, though not giving rise to much discomfort, and the child's health had much improved.

The treatment in these cases, unless otherwise stated, consisted of ammonia, lemon-juice, and the simplest salines.

The first febrile disturbance occasioned by hooping-cough has a tendency to subsidence on the eighth day, but is most variable, both in kind and degree. Sometimes, but not always, there is evident pulmonary implication, and then the kind of cough and illness that is to result is not altogether unexpected; at others there is little to forewarn and that little is often disregarded, the more so as nearly a fortnight will elapse before the paroxysmal cough is unmistakable.

Where there has been but one exposure to a source of infection an immunity is often hoped for and expected just before the symptoms are developed in full violence, and not unfrequently the disease is at this time unintentionally spread. Examples of the more insidious forms will be first adduced; other cases illustrate the temperature changes of the early stages; the last case but one shows the persistence of a high temperature in the latter stages of this disease, and finally one case is given of fatal pulmonary complication at its close.

Influenza. Gastric catarrh.

Case 6.—A boy, æt. 6 years, seems amiss on November the 15th and 16th, but not so much as to prevent him going to school every day. On the 19th he has a cough, and on the 20th a fine rash on the face and chest; he stayed at home without medical aid till the 24th, when he had loss of appetite and hardly any signs of rash. On the 26th the cough became spasmodic and the fine rash on the face became more obvious, with spots smaller and brighter than the mottling from measles. A brother, of nearly four years, has already loss of appetite; a pulse of 100, respiration 30 in the minute, and temperature 100° in the axilla. On the 26th wheezing, with temperature still above the normal.

There was then but little to be complained of; the wheezing was only developed on forced inspiration. On the 28th the temperature was 98·6° in the axilla, and there was already some cough, not evidently hooping-cough, for another week or more, and then not very bad till in the severe weather of the early part of the new year.

Case 7.—A sister, æt. 2½ years, on the same day, November 24th, was dull, sleepy, and slightly febrile; she had slight diarrhœa on the 20th, and had not seemed quite well since. On November 25th the pulse was 120, the respiration 40, temperature 100·5° in the axilla; there was thin white mucus in the throat and the glands of the neck were perceptibly enlarged. On the 26th there were loose rhonchi audible over the whole chest, the temperature half a degree less, other conditions the same. On the 27th the evening temperature was 99·6°; on the 28th it was normal, the child was fretful, but the cough quiet. These children were at no time so ill as the youngest.

Case 8.—A boy, æt. 7½ months, nourished chiefly from the breast, apparently strong and robust, was seen November 22nd, because of supposed tooth irritation; the central incisors were not very forward, and the temperature, even in the rectum, was

below the normal; next day he was said to cough and have short breathing, and the day after he refused food and would only suck a little at a time, but did not seem feverish till night, when very restless and burning hot.

Day of illness.	Date.	Pulse.	Resp.	Temp.	Remarks.
2	Nov. 25	200	80	102·6°	Air enters all parts of lungs; there are ten quick respirations every five seconds, and then a pause.
3	„ 26	200	70	104·0°	Alæ nasi work, dyspnœa relieved by night.
4	„ 27	180	80	102·2°	Respiration improved, moist râles are developed on deep inspiration.
5	„ 28	...	...	101·0°	Vomits with cough.
6	„ 29	130	50	101·5°	Coughs every hour in the night, high pitched rhonchi at right base.
8	Dec. 1	...	...	90·8°	Cough looser, fine petechiæ on skin.
9	„ 2	120	40	99·6°	Improving.

In the cold weather of the early part of this year the spasm with the cough became more violent. The child was kept more at the breast, while, at the same time, the mother had become disqualified (by menstruating on January 15th) for nursing. On February 10th a short febrile exacerbation gave a warning, which was not heeded. On March 12th there was a repetition of febrile disturbance. The child had become thin and weak, and on the 21st he was sick, constipated, feverish, with cough and wheezing, and the following illness:

Date.	Pulse.	Resp.	Temp.	Remarks.
March 22	160	40	103·0°	Large rhonchi, no defective breath sound.
„ 23	140	40	101·0°	Vomits, wakeful, excitable.
„ 24	120	40	99·4°	Crepitation over a definite spot at base of right lung.
„ 27	120	35	98·6°	Below the normal in the axilla, though there is a spot at the right scapula where there are tubular, high-pitched rhonchi and deficient breath sounds; after being suckled much at night he vomited and became feverish, and the next day he was ordered to be weaned.

Date.	Pulse.	Resp.	Temp.	Remarks.
March 29	140	50	101·5°	Congestion of left as well as of right base.
„ 30	140	56	101·2°	Crepitation at right scapula only, left lung healthy.
„ 31	...	...	99·0°	Perspiration; has not been to the breast again
April 1	Not febrile.			Small petechiæ visible on neck and chest.
„ 10	...	...	99 0°	Improving, respiration clear.

The incisor teeth were cut without difficulty in the earlier part of the illness. There had been but little signs of hooping-cough in this last illness, during which on two occasions, probably from a defective state of the mother's milk, a sharply febrile attack has terminated in congestive deposit, and even inflammation of a limited part of the lung coincident with a subsidence of temperature almost to the normal; besides the theoretical analogy of this to what occurs when free secretion results, the practical import of it is that a comparatively low temperature does not exclude mischief, for on neither of these days, March 24th and 31st, would the temperature have sufficed to indicate the state of the lung.

Case 9.—A boy, æt. 9, going to school as a weekly boarder, comes under notice February 23rd with hæmorrhage from the bowels. He has been at home three days with a cough, and he was noticed to cough suspiciously the week before. Two little sisters, æt. 3½ and 2, when first seen on February 25th, had coughs which excited a suspicion of hooping-cough, the more so as they had come on without the signs of ordinary cold. On the 28th the youngest had whooped, the cough was violently paroxysmal; some large, loose rhonchi were audible over the chest, chiefly consonant with the larger bronchial tubes; a slight elevation of temperature, hitherto noticeable, had subsided. Both children had the cough badly for the next week or two; some violent paroxysms in the younger child were cut short by minute doses of antimony.

Case 10.—A brother, æt. 6, much with the elder boy since the 19th, did not seem to be quite well on the 25th, but was without cough; the first permanent molars were near the gum,

and his temperature was below the normal. A slight cough was first observed on the 27th, when the axillary temperature was 98·6° at noon, and 99° at night. On February 28th the temperature was 99·4°, pulse 100, respiration 24, the tongue whitish, no appetite; there was glairy mucus at the back of the pharynx. This slight degree of pyrexia continued until March 5th, when the temperature at night was only 99° in the axilla; the slight acceleration of pulse and the somewhat spasmodic cough causing the face and eyes to redden, but resulting in very little expectoration, being the only signs of illness. There was still glairy mucus in the throat, the tongue was cleaner, and the appetite had returned since March 2nd. On March the 8th the cough had become more characteristic, the breathing was slow and shallow, but a deep inspiration developes some moist râles in the smaller tubes; the pulse continued to be quick, but the temperature had become normal; it was 98·3° in the axilla. During the month an elevation of temperature was, however, frequently met with. On the 30th it was 99·6° at 4 p.m.; the cough dry, and causing flushed face; he had sometimes trouble from tenesmus, and was noticed to be readily fatigued.

Herpes zoster, or Shingles, belongs to this class of disease, and is liable to recurrence; it may directly follow upon a chill, or occur in the course of influenza. The pyrexia begins only with the first spots of eruption, and is greatest on the third day, when they are vesiculated. The general temperature subsides before the vesicles begin to dry, and then the local temperature, often previously at 101°, is not above the normal, though the skin be red and hot to the touch; so that, when at the worst, very little temperature-disturbance remains. The pulse is accelerated throughout, while the rate of the respiration is not affected.

The next case presents features of unusual gravity.

Case 11.—A girl, æt. 5, whose brother is attending a day-school, and has had cough for some time, is seen on March 23rd

with catarrhal symptoms said to be of a week's duration; and, though suspected to be from hooping-cough, the general illness during the next four days was sufficiently severe to arouse doubts both as to cerebral disease and fever.

Date.	Pulse.	Resp.	Temperature. Noon.	Night.	Remarks.
March 23	...	...	99·0° axilla	...	Coryza, cough, with sickness.
„ 27	100	26	...	99·8° recto.	Lips dry and swollen, frequent vomiting.
„ 31	120	40	99·5° axilla	...	Somnolence, great prostration.
April 2	108	30	99·0° „	...	Earache, violent cough, dusky face, swollen lips.
„ 4	100	30	99·8°		Bloody mucus, both with expectoration and vomiting.
„ 6	100	34	100·5°		Small doses of morphia gave no relief to cough and are not to be repeated; large rhonchi at right back, râles everywhere.
„ 7	180	36	102·5° recto		Large liquid rhonchi, some of high pitch; sputa viscid and opaque; conium and ammonia given.
„ 9	120	40	102·0° axilla		Less expectoration, cough violent; takes atropine and morphia.
„ 10	...	...	132·4° „		Thick expectoration mixed with blood, blood in the stools and vomit, respiration freer; to take chloral at night.
„ 11	130	40	103·0° recto		Takes but little nourishment, and retains less.
„ 12	120	40	102·5° axilla		Had sleep after third ten-grain dose of hydrate of chloral.
„ 13	quick, feeble	...	101·4° „		Less sick; chloral to be given at night.
„ 14	...	...	101·7° „		Slept, cough and expectoration; better.
„ 15	130	42	...	103·3° recto.	Bowels relaxed, cough, more prints of blood in the mucus; chloride of aluminum administered in the form of spray.
„ 16	120	36	...	101·6° axilla.	Less blood in the expectoration and vomit; to be carried out of doors.
„ 17	110	30	...	99·0° „	Ate meat, no blood in the stools.

Date.	Remarks.
April 18	Much improved. Temperature 98·9 axilla at 6 p.m. Some large mucous rhonchus heard in coughing.
„ 19	Doing well; coughed frequently in the night; small streaks of blood only in the pharyngeal mucus at the end of coughing.
„ 20	5 p. m.; temperature 99·4°; loose cough, troublesome only at night no blood in the expectoration; complexion healthy; takes cod-liver oil.
May 10	Quite well; no cough except, perhaps, once towards morning.

The following fatal result of hooping-cough closes these observations:

Case 12.—A girl, æt. 1¼, having suffered from hooping-cough for six weeks or more, is seen on April 18th suffering from extreme dyspnœa, with signs of pneumonia of the left lung. The pulse and respiration were too much disturbed to be accurately recorded.

Date.	Temperature. Morning.	Night.		Remarks.
April 18	...	104·0°	recto	Face livid, fusiform cartilage retracted in inspiration, fine dry crepitation over left lung.
„ 19	99·6°	101·2°	„	Administration of brandy of some benefit.
„ 20	101·0°	100·8°	„	Loose râles, moist crepitation, much mucus expectorated.
„ 21	101·2°	102·0°	„	Return of dry crepitation and of dyspnœa, dulness of left back, lips livid.
„ 22	Death at 8 a.m.			

The only temperature-observations in hooping-cough that have come under my notice, beyond the instance given in my last paper (Vol. X, p. 296, where 104° was reached with convulsions and recovery) are those of Dr. Henri Roger;[1] they are sixteen in number, taken in three cases, and fairly indicate what is found in those more extended investigations. Associated with slight bronchitis a temperature of 100·5° is recorded, with very intense bronchitis 102°; without com-

[1] "De la Température dans les Maladies de l'Enfance." 'Arch. Gén. de Méd.,' p. 301, t. vi, ser. 4, for 1844.

plication the lower range is about 99°, and the highest temperature met with was 103·5° in a case where abscess of the lung and cerebral ramollissement co-existed.

In the ordinary course of hooping-cough the temperature variations resemble for a time those tabulated in the case of influenza, corresponding closely with what is observed both in influenza and in croup; but these two diseases, *identical in themselves,* differ essentially from hooping-cough in being suddenly febrile, while the pyrexia preceding the latter is always of some days' duration, and is most marked in some of the most insidious cases. This also is noticeable of diphtheria, and forms a chief means of establishing the essential difference between it and scarlet fever. The early stage, both of hooping-cough and diphtheria, though obscure and often overlooked, is probably the only part constant and inevitable; at this time treatment may be powerless to avert disease, though most powerful in guiding it to a favorable termination; in neither disease is the virulence of the infectious products so great at first as it becomes in the later stages; even then the amount of infection is very much as the amount of morbid secretion formed; and as whatever limits these secretions also limits the amount of disease present, an opportunity is afforded for medical treatment to check the effects, if not to shorten the duration, of the disease.

Meningitis,—though not without elevation of temperature through most of its course, and subject to a sudden and great increase before its fatal termination, yet in the last case given in the table the temperature was found to be below the normal on the day before death, which seemed to result from great effusion of serum and consequent pressure.

TABLE 9.—*Tubercular Meningitis.*

CASE 1.—A boy, æt. 4 months, after slight dreariness and

constipation, on April 10th has a convulsive seizure in the night

Day of illness.	Date.	Temperature. Morning.	Evening.	Remarks.
2	April 11	100·0° recto	101·0°	Convulsive twitchings all day.
3	„ 12	104·0° „	103·6° axilla.	Pupils not contracted, temperature not reduced by cold affusion.
4	„ 13	Death.		

Acute hydrocephalus; remarkable fall of temperature before death.

Case 2.—A girl, æt. 1¾ year, after four days' vomiting is partially unconscious on the fifth day, and delirious at night.

Day of illness.	Date.	Pulse.	Resp.	Temperature.		Remarks.
6	Dec. 30	80	20	100·2° recto	98·6° axilla.	Dilated pupil.
7	„ 31	irregular		100·1° „	98·4° „	Coma.
8	Jan. 1	120	30	100·4° „	...	Surface cold.
9	„ 2	weak, irregular		98·2° „	97·0° in folds of abdomen.	
„	At night		...	100·0° „	...	Limbs cold.
10	„ 3	Death. Some heat of surface before death.				

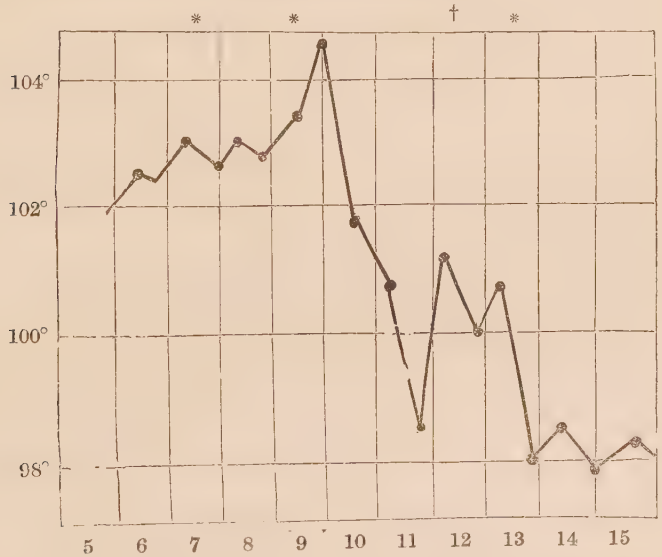
I remember much anxiety and doubt as to whether some early head symptoms in a child might be owing to tubercular meningitis or to typhoid fever, a question which at certain stages can readily be decided by temperature. This is well illustrated by a case of typhoid fever in an infant of sixteen months old, for which I am indebted to Dr. Hare.

Table 10.—*Typhoid Fever.*

Case 1.—An infant, æt. 16 months, has diarrhœa, and high temperature with evening exacerbation for a week.

Day of illness.	Date.	Temperature in axilla. Morning.	Evening.	Remarks.
7	March 14	...	103·0°	Rose spots.
	„ 16	...	103·4°	Ditto.
10	„ 17	104·8°	101·8°	
11	„ 18	100·8°	98·4°	One or two fresh spots.
12	„ 19	101·0°	100·0°	
13	„ 20	100·8°	98·0°	
14	„ 21	98·4°	97·8°	

This case is thus represented in diagram.



* Rose spots. † One or two fresh spots.

For the details of the following case I am indebted to my friend and former pupil, Dr. Buckell, of Islington. Diagrams of it and of another case in an older girl, under my care, in which there was no diarrhœa are given for comparison with the somewhat anomalous case at the end.

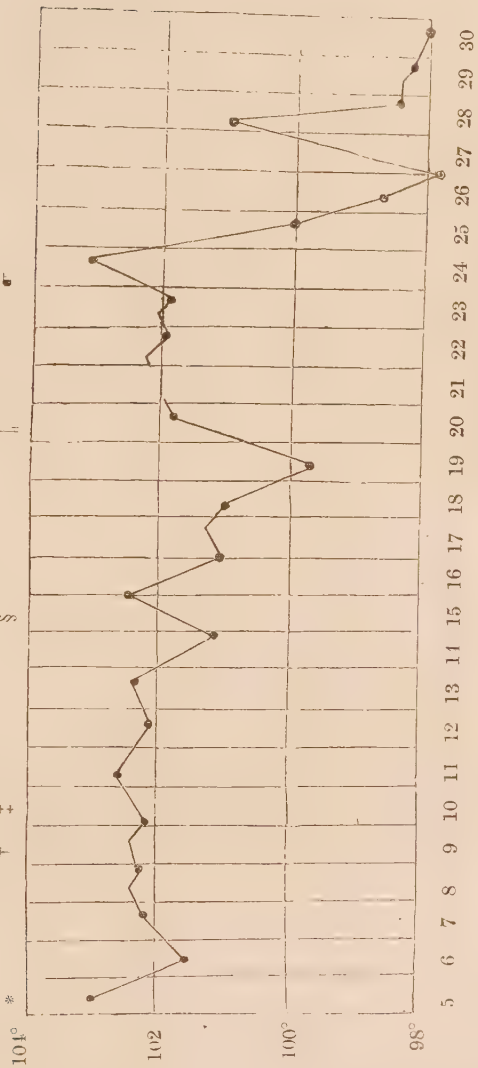
Table 11.—*Typhoid Fever.*

Case 2.—A girl, æt. 8, was seen after about a week of malaise and anorexia. Complained of pain in abdomen; on pressure gurgling was elicited in left iliac fossa; tongue was pyrexial in character.

Day of illness.	Temp. Noon.	Remarks
7	103·0°	Four grains of cinchonæ sulph. given in twenty-four hours.
8	101·8°	Ditto.
9	102·2°	Ditto. Diarrhœa very severe.
10	102·4°	Ditto. Rose spots appeared.
11	102·4°	Ditto.
12	102·8°	Ditto.
13	102·2°	Ditto.
14	102·6°	Tongue became brown; stimulant given with cinchona.
15	101·2°	Ditto.
16	102·6°	Ditto.
17	101·2°	Ditto.
18	101·2°	Ditto.
19	99·9°	Ditto.
20	102·0°	Increase of anorexia.
21	101·2°	Vomiting came on; cinchona stopped, nourishment and stimulants given by bowel, nothing by mouth.
22	102·1°	Ditto.
23	102·0°	Ditto.
24	103·4°	Cinchonæ sulph. gr. viij given by bowel in twenty-four hours.
25	100·1°	Ditto.
26	98·8°	Ditto.
27	97·4°	Ditto.
28	101·2°	Ditto.
29	98·4°	Ditto.
30	98·2°	Cinchona stopped; mineral acid given by mouth.
31	98·0°	

Typhoid fever diagrams.

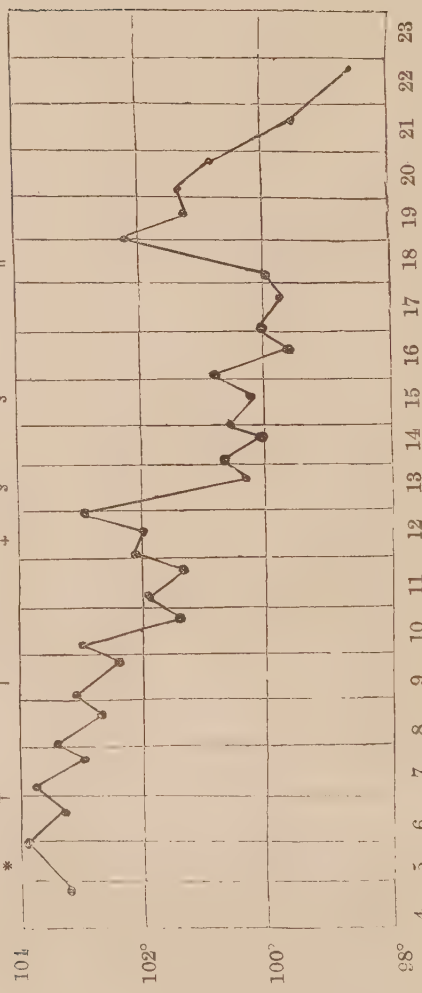
CASE 2.—A girl, æt. 8, seen after some days' illness.



* Four grains of cinchonine daily. † Diarrhœa. ‡ Rose spots. § Stimulants given.
‖ Omit cinchonine. ¶ Resume cinchonine.

Typhoid fever without diarrhœa.

CASE 3.—A girl, æt. 16, seen on a fourth day of illness.



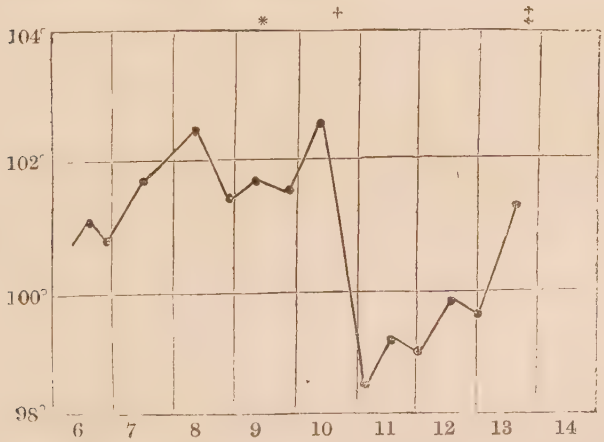
* Bronchial irritation. † Quinine given at night. ‡ Rose spots, abdominal pain.
§ Hæmorrhage from bowels. || Phlebitis in one leg.

CASE 4.—A girl, æt. 8½ years, after being ten days at the seaside in hot weather, but in healthy lodgings, takes aperient medicine unnecessarily. She feels tired and weak afterwards; the next day is fatigued by being too much out of doors, and becomes feverish at night; for six days she continues to be taken out, though the fatigue, fever, and loss of appetite increase.

Day of illness.	Pulse.	Resp.	Temperature, axilla. Morning.	Evening.	Remarks.
8	110	27	...	102·2°	Has travelled home by railway; ordered to bed.
9	100	30	101·6°	102·4°	No action of bowels; two lenticular spots on abdomen.
10	108	32	...	102·6°	Red spots very numerous; bowels inactive.
11	100	30	98 2°	..	Spots fading; constipation relieved.
12	...	...	100°	...	Some fresh spots on sides of chest.
13	110	32	...	101·2°	One or two new spots behind the shoulders.
15	100	30	...	99°	Bowels inactive.
21	...	...	...	...	Looks well; appetite returned.
30	...	...	...	...	To return to the sea.

Infantile remittent or gastric fever; constipation.

CASE 5.—A girl, æt. 7 years.



* One or two lenticular spots on body. † Numerous spots.
‡ One or two spots on shoulders.

Case 6.—A boy, æt. 3½ years, brother to the last, went to the seaside the day before the sister was ill; she came to him, but they were not much together; three days after he is sick in the morning, and his bowels disturbed twice; next day and the third day he is dull and languid, with no action of the bowels, and considerable fever.

Day of illness.	Pulse.	Resp.	Temperature. Morning.	Evening.	Remarks.
4	...	...	High		Castor oil acted twice; second relief is almost black.
5	108	30	...	101·4°	Has travelled home; yawns frequently; a sore spot on edge of mouth.
6	112	28	100·1°	...	In bed; tongue cleaner.
7	100	26	98·6°	...	Herpetic spots on lower lip; red spots seen on abdomen.
8	...	...	98°	...	Numerous red spots, like the sister's, over body; one light coloured relief from the bowels.
10	...	...	...	98·2°	Bowels are not quite right.
12	...	...	...	...	Better; appetite good; bowels natural.
15	...	...	98·9°	...	Slight diarrhœa for two days; today dysenteric; tongue pale, with thin fur.
21	...	...	...	...	Cheerful and well; pale; to return to the sea.

These cases are somewhat anomalous; the absence of diarrhœa, as shown in the case which precedes them, is not enough to distinguish them from typhoid; a sudden remission may occur in undoubted infantile typhoid. The lenticular spots could not without hesitation be called "rose spots;" they differed from those of typhoid in being more acuminate and less completely effaceable under pressure. Nothing can here be affirmed of the identity of infantile remittent and typhoid, for these cases were not altogether identical with what is generally termed infantile remittent, though had not perfect rest in bed been enjoined for some time after the first remission doubtless the febrile disturbance would have returned. The second case can hardly be classed with the mildest form of typhoid, yet the two cannot be dissociated.

Diagnosis.—The value of temperature observations in diagnosis can now only be slightly touched upon. While readily conceding the merit of priority to M. Henri Roger[1], some credit may be claimed for having shown that the temperature variation of infants follows the same rules, and is within the same limits as that of adults, and is therefore as serviceable for purposes of diagnosis.

Typhoid fever, in its ataxic form, when it presents the greatest resemblance to meningitis is, as has been shown, readily discriminated from it by temperature. In the sthenic form of typhoid fever, an intercurrent bronchitis or pneumonia is accompanied by a greater temperature-disturbance than would be caused by either of these complications, while the disturbance of the pulse and respiration is less than that met with in simple pulmonary disease. Dysentery and enteritis are readily distinguished even from the slighter forms of typhoid by their lower range of temperature.

In scarlet fever, though the disturbance of temperature is often extreme, it is insufficient for diagnosis, or even for discriminating between it and a disease so nearly allied as influenza. In scarlet fever a temperature as low as 99° has been met with on the second day in a vigorous subject, with full rash, ending on the third week in desquamation: in influenza, with no other complication than full tonsils, the temperature may continue at 101° till the fourth or fifth day; with ulcers on the tonsils, or herpes of the lip and face, the temperature on the second day may even exceed 103°, and has been found at 102° on the third; a temperature less than this, generally very near 100°, is met with in the diffused bronchial irritation with which the more ordinary attacks of influenza begin; in both forms the difficulty of diagnosis may be increased by the presence of a finely diffused rash[2] on the chest and neck, either with the first symptoms of illness, or appearing after

[1] "De la Température chez les Enfans a l'état Physiologique et Pathologique." Par Henri Roger. 'Archiv. Gen. de Méd.,' 4me série, tom. v, p. 273. Paris, 1844.

[2] Of the two illustrations given of mild scarlatina the boy's case is probable of this kind; that of the girl was undoubted scarlet fever.

the application of the warm linseed poultice so useful for their relief.

A low temperature is often sufficient to enable a diagnosis to be speedily arrived at that otherwise must be uncertain or be delayed; a lad exhausted by fatigue and exposure has been found with symptoms that might have indicated either typhoid or scarlet fever except for this test. In laryngismus stridulus, as elsewhere stated, the low temperature invariably accompanying the associated states of irritation and defective nutrition, at once serves to distinguish the spasm from laryngitis, or from an affection symptomatic of serious organic disease.

It is seldom that a single temperature observation could or should be made the basis of a diagnosis; moreover we must remember that it is not to show what the *disease* is, but *how it affects the patient* that temperatures are taken. We have other means of diagnosis that special training must teach, to let us know what form of disease is present. To learn how the individual will bear it is the result of an experience difficult to impart; yet to know this is of as much importance, at least to the patient, as to know the name of the disease, and it is this knowledge which every temperature observation in some degree affords us; yet even here a series of observations is requisite, and experience must give them their value.

Elevation of temperature is useful as indicating the presence of disease generally. How often have the indications of the thermometer afforded the first revelation of unsuspected disease, pneumonic consolidation for example.[1] Absence of disease cannot, however, be affirmed because the temperature is not, at a given time, increased; many diseased processes end in a local process not always accompanied by high temperature; indeed, a low temperature has been found with quite recent congestion of the lung. On the other hand there are times

[1] It has frequently occurred to me to see children forced to exertion, and sent out (especially at the seaside) when a single temperature observation would have shown the necessity for rest, and have guarded against much consequent illness.

of life and states of system, when we meet with sudden rises of temperature not always betokening danger, but only the necessity for care. This is sometimes seen in the puerperal state from only a cracked nipple. In the period of most rapid growth in childhood there is a tendency to just such a state; the presence of a tooth at the gum, or of worms in the intestine, may excite it, but it has no special connection with teeth or with worms; it will occur as readily after all the first teeth are through the gum as before; it is referable to diathetic peculiarities, bad air, bad nutrition, a wrong or defective food, and to rapid growth. Instances have occurred to me of a child growing ten inches in the first year with backward dentition, and only three inches in the second year: another, of slow growth in the first year with forward dentition, and a growth of seven inches in the second year. With this rapid growth, and with some instances of suddenly high temperature in other conditions, has been found associated *gastric* rather than pulmonary congestion, and it is in this association that the benefit said to result from the use of a mercurial aperient has generally been obtained.

Therapeutics and hygiene.—During any considerable elevation of temperature sleep is impossible, nutrition is interrupted, and waste increased; indeed, in a continued high temperature the tissues of the body not only waste, but are destroyed. Hence, empiricists have sought for remedies to reduce temperature; but the high temperature is a direct result of the diseased action present, and these remedies, which are useful in reducing dangerously high temperatures are those which have a controlling power over the disease, so that temperature may be a test of the suitability of a particular kind of treatment to the disease present. Hence the benefit of cold affusion and quinine in typhoid and scarlet fevers. Since using quinine in the early stages of the latter, whenever there was a tendency to a high night temperature and consequently to nocturnal delirium, the temperature has never reached so high a point as it frequently does when not checked in this way. This effect is equally remarkable in diphtheria, where

the nocturnal delirium (so often noticed to occur in children, who, as Fothergill remarks, were quiet and sedate in the day) is a result of the evening exacerbation of temperature. The effects of quinine in this way are very marked in the early stage of these diseases, but it has no such influence in their later stages; not only this, but chloral, generally of service in hooping-cough, caused no lowering of temperature in one case, where the use of a weak solution of chloride of aluminium 15 grs. to 1 oz., used in the form of spray, by exerting a favorable influence on the condition of the respiratory tract, resulted in a diminution of temperature; the same thing has happened where the cough and the expectoration have been lessened by a combination of morphia and atropine.

Cinchonine has been found to have precisely the same effect as quinine; the muriate of cinchonine is cheaper, the powder in any dose is easily given in wafer paper, it readily dissolves with a very little hydrochloric or phosphoric acid, and is readily taken mixed with water and glycerine, to which a little chloric ether may be added. By means of cinchonine and quinine, in five- or ten-grain doses, the night fever of tuberculosis has been stopped; more than once has tuberculosis itself been arrested; the febrile stage of many diseases may thus be shortened or greatly controlled, and not only discomfort but danger avoided: indeed, what is effected by this remedy in ague is in some degree effected by it in other febrile states, the tendency to high temperature is checked and at length overcome.[1]

On the other hand, a marked increase of temperature results when the "eliminating" treatment is followed too closely.

[1] In the admirable essays of M. Henri Roger already referred to, 'On the Elevation of Temperature occasioned by Disease,' it is asked at the commencement, "Est il, parmi tous les mystéres de l'economie humain, quelque chose de plus dique de notre attention que cette force mystérieuse créé par la maladie?" In answer, we may compare with it that power from the vegetable world often great enough to control it, which is mysteriously created in the cinchona plant. At the conclusion of these essays the wonderful efficacy of the external use of cold water, whether by means of the douche, the sheet, or the bath, in typhoid is the chief therapeutical result of a quarter of a century; German practice confirms this deduction of French science.

In the diseases here under consideration dilute the poison by all means, by pure air especially, and favour the subsidence of the diseased action. To eliminate a poison, if that were possible instead of eliminating the fluids of the body, we must remember that the quantity of poison eliminated can only be in proportion to the diseased action present, so that the diseased action must be increased in the process; moreover, if the last shred of desquamated cuticle in scarlet fever be infected, surely the last atom of living tissue must be, and if the body could be reduced to this and then restored, it would be restored in its state of scarlet fever, and resume the processes peculiar to it till they were accomplished.

Some points of hygiene are elucidated by temperature, to which there is barely time to refer. Dr. Finlayson has called my attention to a greater lowering of night temperature in children than my own observations bear out. Where I have found a temperature as low as 97° in the night, I have also found a low range of temperature in the day, and there seems to be a special connection between this and a dislike or a deprivation of fatty food. In a collection of facts any conjecture is an error, yet it is possible that this point might be eventually found useful in correcting the diet tables of workhouses and schools.

The following appendix of extreme and mean temperatures in some diseases of children may be of use:

Temperature in—	Lowest.	Highest.	Mean.
Pneumonia	...	105·8°	...
Pleurisy	99·0°	104·0°	101·5°
Peritonitis	98·7°	105·0°	103·0°
Dysentery	99·2°	101·2°	100·7°
Enteritis	98·7°	102·5°	99·0° or 100·0°
Stomatitis	100·0°	102·0°	...
Thrush	95·0°	102·4°	...
Meningeal tubercle...	98·0°	102·0°	...
Meningitis	95·2°	106·0°, once 108·4 just before death.	
Smallpox	98·7°	106·0°, once 105·0° the day before the eruption.	

Most of these figures are from the essay of M. Henri

Roger, in which there is hardly a statement that has not been unintentionally verified in the course of inquiries which, had they not been carried out independently and in ignorance of the good work there extant, would probably not now be offered for publication.

Dr. Woodman asked Mr. Squire how long he allowed the thermometer to remain in the axilla or rectum in the cases recorded. His reason for asking was, that the temperatures observed by Mr. Squire were rather lower than those of continental observers, and some, indeed, seemed almost normal.

Dr. Rasch did not consider three minutes for the thermometer to remain in the axilla sufficient, if reliable observations were wanted. Except in those cases where close apposition of the arm to the chest had prevented the skin from cooling, a few minutes were first wanted to warm the axilla again, and, however sensitive an instrument it may be, it would do no more than give the actual temperature, as Dr. Baümler had convincingly shown by careful experiments. Wunderlich many years ago had also found out that it required a longer time to get the right temperature. There could be no practical objection to the longer time, as every practitioner will and must find a quarter of an hour for a serious case; a time which can be profitably spent in further careful examination of the patient, and in giving the necessary directions. Another point not insisted upon in the paper, but which was of the greatest importance, was the frequency and regularity of thermometry. For, although a single observation has its value in showing that a patient is at the time in fever or not—to form a different diagnosis, to guide our prognosis, or control the efficacy of our therapeutics; it is indispensable to make, or have made, at least two observations at regular hours, say 8 a.m. and 6 p.m. The physician who is himself convinced of the importance of thermometry will soon convert his patients, their nurses, or some member of their families into willing and able assistants, who, with a little instruction, will make as many observations as required, and write them down. Following the advice of his eminent teacher, Wunderlich, Dr. Rasch has for a number of years introduced the thermometer into his private practice, and values it both as a comfort to the families in cases of unnecessary alarm, and as a timely warning in cases of real importance. The messages he receives often contain the temperatures of the patient, and guide him in arranging the order of the visits to be made.

Dr. J. J. Phillips referred to some observations published by Mr. Goodhart in the last number of the 'Guy's Reports,' tending

to prove that, for practical purposes, three minutes was a sufficient time to allow the thermometer to remain in the axilla, if care were taken to hold its bulb in close apposition with the skin.

Dr. WILTSHIRE said that, with reference to the point just alluded to, there was truth on both sides. No doubt most persons practically conversant with the use of the thermometer knew perfectly well that, for all ordinary purposes, three minutes sufficed, since the point to be ascertained was whether or no there was a marked rise of temperature measurable by degrees, and not whether the temperature was a fifth of a degree higher or lower. Still, perhaps, there were cases in which very careful measurements were desirable, and in such he would agree with Dr. Rasch that a prolonged thermometric observation should be made. Dr. Wiltshire then proceeded to compliment Mr. Squire on his paper, which exhibited an amount of painstaking and careful observations which were highly meritorious. In commenting upon the paper, Dr. Wiltshire said he could not agree with his friend Mr. Squire in regarding the rash in scarlet fever as the first symptom of that disease. Besides the prodromata common to all the acute specific diseases he thought that, in scarlatina, sore throat was a much earlier symptom than the eruption; and further if the rash were as Mr. Squire said, the first symptom, it rendered the use of the thermometer superfluous, since we did not need its aid to enable us to diagnose the disease, the rash being a *sign*. With reference to pyrexial disorders of the influenza class, Mr. Squire had said that, as soon as expectoration was established, the temperature fell. This fact Dr. Wiltshire considered as doubly valuable, for, while its indication was obvious, it not only agreed with experience, but justified the empirical treatment of to-day, which we had inherited from past ages, the treatment by means of salines, expectorants, &c., and thus science stepped in to confirm our observations and experience, and aid us in our every-day clinical work. Dr. Wiltshire agreed with the author in his statement that there was a febrile condition at the onset of hooping-cough. He (Dr. Wiltshire) believed that pertussis was, in fact, an acute specific disease, a fever, only, without eruption. He thought that this fact should teach us an important therapeutic indication, viz., to avoid exposure at the onset of the disease. Lastly, Dr. Wiltshire believed that, ere long, much good would come of such investigations as those of Mr. Squire, for although, perhaps, many did not readily perceive their full meaning, yet in time to come, after many observations were made, it would probably be possible so to arrange and tabulate the facts gleaned that their import would be apparent at a glance, and thus they would then be of service to the busiest practitioner.

Mr. SQUIRE, in reply, said the temperature was only taken in

the axilla when there had been no exposure of the skin. The thermometer was retained from two to five minutes and afterwards shifted to the other axilla; the accuracy of these observations were secured by frequent comparison with the external temperature. With some exceptions in the two cases of mild scarlet fever (made for me by physicians remarkable for their accuracy), personal observations were alone depended on; evening visits were specially made, because even a slight elevation of temperature in children, in the earlier part of the night, is of the greatest importance, and is sometimes the only indication of the ingress of an infectious ailment. We may not be able to arrest a disease once begun, but we may prevent its extension to others by timely isolation. Moreover, instead of a little child being over exposed or over fatigued in the first stages of an illness where rest is of the highest importance, we are able by early attention to save it from the more serious consequences that are known to follow in many such ailments—as hooping-cough and diphtheria. The influence of quinine is certainly to be traced in the tables of scarlet fever temperatures; it bears out the practical conclusions of my neighbour, Dr. Hood. Since I have used it in somewhat earlier and in rather larger doses ($1\frac{1}{2}$ gr. to a child of five years old) than he does, I have not met with that high range of temperature, from 106° to 107° or 108°, that sometimes would be reached with such terrible consequences to the integrity of the tissues. In the case of hooping-cough, I stayed in the house when the first grain of quinine was given, and marked its effect in reducing a temperature that had kept at above 103° for two days; another dose was given soon after I left, and in six hours from the first dose there was a fall of three degrees; the third dose caused some deafness, and it was discontinued. In the case of tuberculosis the well-known temperature changes with the high evening exacerbation were not checked by rest, by stimulants, or any of the means directed against the evident deposit, and its commencing alterations in the left apex of the lung. Doses of from 5 grs. to 10 grs. of quinine given in solution rapidly arrested the night fever, and from that time the boy gained in flesh, and is now fat though not robust.

HYDATIDS OF THE UTERUS.

By Graily Hewitt, M.D., F.R.C.P.

The case now presented to the Society is, I believe, almost unique. True hydatids of the uterus is a disease almost unknown in pathology, and there is perhaps not more than one quite authentic case on record. That true hydatids may be developed in the uterus has always been supposed; until late years confusion prevailed as to the meaning of the term, and doubtless the older cases reported were instances of that curious degeneration of the chorion which we now designate the hydatidiform mole, always the result of pregnancy and bearing not the least relation to true hydatids.

The case now to be related is, however, one in which most undoubtedly true hydatids were discharged from the interior of the uterus while the patient was under actual observation, and the facts verified in the completest manner.

Mary Ann Martin, æt. 35, a general servant, was admitted into my ward, at University College Hospital, on March 26th, 1870. The patient had been married nine years, but had not lived with her husband for a long time. She had one child fifteen years ago, but has not been pregnant since. Catamenia regular but painful. She is a native of Norfolk, but has lived in London during the last three years. Has been in the habit of eating pork and veal, particularly the latter of late. Has not been in the habit of caressing dogs.

For the last eight or nine years the left side of the abdomen has been swollen and occasionally the swelling was observed to be painful, but no marked increase in this enlargement has been observed.

On Tuesday, March 22nd, a small quantity of grape-like masses came away from the vagina together with some fluid. This occurred while the patient was washing, and without

pain or hæmorrhage. On the following day about half a pint of the same material came away, but with a good deal of pain. No hæmorrhage occurred. The patient brought to the hospital a pot containing the expelled matters. These were found to consist of globular transparent bladders varying in size from a grape to that of a walnut, containing fluid, and floating in a thickish mucous-like fluid.

The state of the uterus is as follows:—The uterus is evidently enlarged, and especially backwards. The whole size of the organ is about that of the gravid uterus at from two to three months, but it is irregular in shape. The sound passes freely in, and can be turned about in such a manner as to show that there is a cavity capable of containing an orange. By using a little care it can be satisfactorily determined that the point of the sound impinges on rounded irregularities on the interior of the uterus, such as would be produced by portions of globular masses attached to it. It would appear as if the uterus had undergone its increase in size chiefly by dilatation and expansion of the posterior uterine wall. Satisfactory evidence of the expelled masses being true hydatids resulted from the microscopic appearances.

From the 27th of March to April 2nd there occurred almost daily, while the patient was under observation, discharges of a similar character. Dr. Wickham Legg was kind enough to draw up a report on the specimens passed to the following effect:—

Report on a specimen received from Dr. Graily Hewitt, on March 25th, 1870.

The specimens which were referred to me for examination consisted of vesicles of a dirty white colour, in some cases completely, in others partially, distended with fluid, varying in size from a small pea to a walnut. One large piece of membrane which seemed large enough to have contained most of the vesicle was observed. The vesicles were

distinctly separate from, and in no way connected with each other. On opening several of these vesicles they were found to contain an albuminous fluid rich in sodic chloride. The envelope was transparent and colourless; it rolled itself inside out when a free incision was made into it, and under the microscope showed a very distinct lamellar structure. In the fluid which escaped from the cyst, and on the cyst wall, were found minute white bodies, which on microscopic examination proved to be echinococci-heads. They showed a rhomboidal shape with two circles of hooklets in the centre of the head.

J. Wickham Legg.

Indubitably, therefore, these were hydatids, and equally certainly they came from the uterus. The patient is at this moment in the hospital.

Further supplementary remarks.—The case was treated as follows:—April 4th, uterus injected by a mixture of tincture of perchloride of iron one drachm, water three drachms. Two days later the injection repeated with the effect of removing the unpleasant odour of the discharge. The injection was, I believe, repeated a third time. While in the hospital no more hydatids were expelled, and the uterus was believed to be empty.

The patient left the hospital feeling well three weeks after her admission.

JUNE 1, 1870.

Dr. Graily Hewitt, President, in the Chair.

Present—41 Fellows and 2 visitors.

The following gentlemen were elected Fellows: Dr. Craigie, Dr. Huthwaite, and Dr. Ashburton Thompson.

The following resolution, having reference to the recent death of Sir James Simpson, was proposed by Dr. Tyler Smith, seconded by Mr. Spencer Wells, and carried unanimously:—

"That the Fellows of the Obstetrical Society desire to express their deep sympathy with the family of Sir James Simpson in the loss they have sustained, and to record their sense of the benefits he has conferred on medicine and mankind, especially in the department to which this Society is devoted."

In moving the resolution Dr. Tyler Smith said,—The Council has devolved upon me the honour and duty of proposing a resolution of sympathy with the family of our late honorary Fellow, Sir James Young Simpson, Bart., and expressing our sense of his pre-eminent merits. His loss has of late been eloquently deplored in all quarters as an illustrious citizen and a physician of world-wide reputation. But it falls to us more particularly to lament his death as that of

the man who has stood, for many years, the unchallenged head of the obstetric department of medicine, not only in this country, but throughout the civilised globe. We may be proud that it was in the lines of thought belonging to obstetrics that his mind was formed, and reached its noblest development. It is true that his exuberant intellect overflowed into medicine and surgery as well as into general science. Still, it is as an obstetrician that he will be ultimately best known, and receive his greatest meed of fame. It was but in accordance with the fitness of things that the humane physician-accoucheur, accustomed, in his early life, through many years, to witness the pangs of woman in travail, should have had the largest share in the discoveries which, to a great extent, conquered human suffering and gave him a motto, *Dolore victo,* proud as any of which the world can boast. Chloroform and the electric telegraph will ever stand forth as the highest triumphs of this age! We may well be permitted, therefore, to dwell affectionately and reverently upon the life and memory of the man who has recently passed from among us in the zenith of his career. It is we who have, as it were, his ashes in our more especial keeping. It is in obstetric work and obstetric literature that his name and fame will be inwoven and transmitted to future ages. We may probably add him to the roll containing such names as Mauriceau, Chamberlen, William Hunter, and Naegelé, among which his will shine not the least illustrious. I might easily dwell longer on this eulogium, but in moving the resolution will only add that we do him mere justice, and ourselves all the honour, by recording in our annals regret for his loss and admiration for his genius.

Mr. Spencer Wells seconded the resolution with the mournful satisfaction felt in attempting to do honour to the memory of a lost friend. His acquaintance with Simpson dated from 1855, when with great liberality he invited him to operate in the Royal Infirmary of Edinburgh, on a case of vesico-vaginal fistula. He (Mr. Wells) arrived in Edinburgh on New Year's Day, 1855. The night was spent with

Simpson, Dr. Priestley, and others, in visiting the prisons, whisky shops, and other low haunts of that city; the next day among Simpson's private and hospital work. At night Simpson entered into a learned discussion at the Royal Society on some of the Buddhist opinions and monuments of Asia compared with the symbols of the ancient sculptured "standing stones" of Scotland. After this meeting Simpson drove him (Mr. Wells) to a country house, the scene of the ball in Waverley, where patients were visited in the middle of the night, the house and grounds seen by moonlight, and Edinburgh only reached in the early morning. That day Mr. Wells did his operation in the Edinburgh Infirmary and returned to London in the evening, Simpson having only been in bed two hours all this time—no uncommon example, it was said, of his marvellous activity and power of work, and now he is gone few will think that the Lord Provost of Edinburgh went too far when he called the discovery of the anæsthetic effects of chloroform "a great gift to mankind." Simpson never claimed to be the discoverer of anæsthesia; but he did claim, and claim justly, the first application of sulphuric ether as an anæsthetic in midwifery, and the discovery of the power of chloroform, which discovery extended rapidly and greatly the practice of anæsthesia; and Fellows of the Obstetrical Society, accustomed to watch suffering women during the most trying moments of their existence, are well able to appreciate the value of the discovery, and the energy and ability with which he ascertained the effects of ether and chloroform in all stages of parturition, and his convincing answers to the so-called religious objections, as well as the tact and wit by which he overcame those who thought the new practice "unnatural." "How did you come from Belfast?" said he to a lady. "By steamer, to Glasgow." "That was unnatural, madam. Why didn't you swim?" By Simpson's hard work anæsthesia in midwifery became an established practice, and his demonstration of the effects of chloroform led to its rapid extension in surgery and medicine. He had well earned his crest motto, *Dolore victo.* In his own last answer to Bigelow this is the substance of his claim,

and his last words should live in our memory: "I am a sad invalid just now, and quite unable to write with the force and brevity required. With many of our profession in America I have the honour of being personally acquainted, and regard their friendship so very highly that I shall not regret this attempt—my last, perhaps—at professional writing as altogether useless on my part, if it tend to fix my name and memory duly in their love and esteem."

Dr. Junker exhibited two instruments he had devised for local applications to the uterus. The first was an adaptation of Mr. Durham's syringe for the treatment of gonorrhœa, for washing out and cleansing the uteri cavity from its secretion, and for injecting caustic fluids into the same, and the canal of the cervix in the treatment of uterine leucorrhœa. It consists of a slender tube of vulcanite ten and a half inches in length, and ending, gently curved, like an anterior sound, by an elongated, olive-shaped bulb, with perforations made in the direction towards the opposite end, so that the injected fluid passes from behind forward, exactly as in Mr. Durham's instrument. If used for cleaning the uteri cavity, its other end is fitted either to the tube of an enema-syphon, or to a large india-rubber enema bottle. If applied for injecting caustic fluids it will be connected with a small caoutchouc bottle holding about half an ounce of fluid. The bulb passes generally readily the cervical canal, and the outer cavity is cleansed of its adherent ropy secretion by gently injecting a stream of a weak solution of hydrochloric acid (ʒij of diluted Hydrochl. Acid to 1 lb. of water), which proves more efficient to remove the secretion than pure water. The injected fluid escapes along the tube. After this proceeding the cavity is wiped with cotton-wool fastened to the flattened end of a probe. After having thus thoroughly cleansed the secreting surface, caustics may be applied according to the emergencies of the case. Dr. Junker injected several times into the cavity, and, as a rule, always into the cervical canal, by means of the same instrument attached to the small india-rubber bottle, a saturated solution of equal

parts of sulphate of zinc and alum, without the slightest inconvenience to the patients, who in the majority of cases were hospital out-door patients, and immediately rose after the injection. Dr. Junker is also in the habit of cauterising the cervical canal with solid sticks of the sulph. of zinc and alum, the use of which had been suggested to him by Dr. Howitz, of Copenhagen, who found from long experience that they are less liable to cause uterine colic than nitrate of silver or caustic potash. Many of the cases improved and were cured in a comparatively short period, some among them which had resisted various other applications previously. There were, however, cases which were but little benefited by that caustic, and afterwards readily yielded to several applications of styptic lotion, nitrate of silver, or tannin and glycerine. The above-mentioned solution is also used by patients at home by means of cotton-wool pessaries. The second instrument serves for the application of caustic powders to the ulcerated neck. It consists of a vulcanite tube ten inches in length, with a blunt open end. At one side of the tube near its connection with a small india-rubber hand-bellows is an oval opening, closing by a short sliding piece of outer tube, which serves for charging the instrument with the powder. Between the tube and the bellows a valve is inserted to prevent the suction of the powder into the latter. By means of this instrument the powder can be applied to the very spot intended to be cauterised, or it can be scattered on a larger surface, and also applied within the cervical canal, after having been cleansed previously of all adherent secretion. Dr. Junker has used, besides other caustics, a fine powder of equal parts of alum and sulphate of zinc, in many cases with most satisfactory effect. Both instruments have been made by Messrs. Krohne and Seseman, 4, Baker Street, Manchester Square.

Dr. Playfair said that Dr. Junker's instrument for introducing various powders into the cervix uteri reminded him of a similar appliance which at one time had been largely used by Sir James Simpson, who had employed a great variety of substances in this way. With regard to the syringe it was

open to the same objection as all means of using intra-uterine injections, viz., that they were apt to bring on very severe symptoms from retention of the fluid in the cavity of the uterus, and the subsequent contraction of the uterus in expelling them. He (Dr. Playfair) did not believe that any mechanical contrivance would obviate this except artificial dilatation of the cervix, and that was too severe an operation to be needlessly undertaken. He was strongly in favour of intra-uterine treatment, and believed that old standing cases of uterine leucorrhœa could not be cured without it, but he thought much the best way of applying it was by means of flexible probes, round which a thin film of cotton wool was wrapped, saturated in the alkaline application, far the best, being a strong solution of carbolic acid, according to the plan he had described in a paper "On the Treatment of Chronic Uterine Catarrh," read before the British Medical Association at Leeds. In suitable cases the os was sufficiently patulous to admit the probes with ease, and he had never yet failed to cure even the most chronic cases in this way.

Mr. Spencer Wells said Dr. Junker's mode of cleansing the uterine cavity, or the canal of the cervix, from albuminous fluids added greatly to the efficiency of any application made to the mucous membrane. If nitrate of silver were used, a compound of chloride of silver and albumen resulted, which was of little or no use. In using solid nitrate of silver, the objection to Lallemand's instrument was the difficulty of cleaning it, and the possibility of infection when used for several successive patients. It was far better to keep some powdered nitrate of silver, and use this on a flat aluminium probe, to which a little powder would adhere if the probe were oiled.

Dr. Wiltshire said that Dr. Junker's instrument was almost identical in principle with one he had exhibited to the Society, which was described in the 'Transactions' for 1868.

Dr. Potter showed an ovarian tumour from the body of a woman who died in the Westminster Hospital from the effects of a severe burn. Her age was 83. She called

attention to the presence of the tumour in her lifetime, although it did not appear to have caused her much inconvenience. A sense of fluctuation was felt on examination, which led to the idea that it contained some fluid.

The tumour had a few parietal and omental adhesions, and was connected with the right side of the uterus by a thin pedicle, which was completely twisted from right to left. On breaking down the adhesions, and turning the tumour completely round once, the pedicle was straightened.

The tumour appears to consist of a monolocular cyst, containing solid cheesy matter, with a few small balls of hair. Its weight is eighty-nine ounces. The cheesy matter, examined microscopically, is composed of granular *débris* and old fat-cells.

The uterus and left ovary were in the condition usually found in extreme old age.

Dr. Horniblow, of Leamington, gave particulars of a case of monstrosity which had occurred in his practice.

On May 12th I was called to Mrs. W—, æt. 31 years, in labour of her first child, supposed to be only eight months advanced in pregnancy. She had lost some quantity of blood and appeared faint, with small frequent pulse; membranes having ruptured just previous to my arrival. I found the os partially dilated, with a substance presenting, soft and lacerable, which, after careful examination, I judged to be placenta prævia. I was confirmed in this opinion by the woman's appearance, the loss of blood, and the fact of her being scarcely eight months advanced in pregnancy. As the os was sufficiently dilated to admit the hand, and as blood was still draining away, I at once made up my mind to hasten the labour by turning the child. I therefore introduced the hand and found a foot, but had some difficulty in extracting the child. To my surprise, on completing the delivery, I found, as it were, at one end of the body, a huge liver. It now struck me this had been the presenting part, which I at once verified by reintroducing my hand, when I found the

placenta still sticking to the right side of womb, the edge reaching to the os. On examining the child I found it to weigh

about six pounds, and to be, apparently, a fœtus of eight months; the liver quite exposed, unusually large; the walls of the abdomen so thinned as to be quite transparent, easily lacerable, and incorporated with the uterine membranes. The parietes had been ruptured, no doubt, with the breaking of the uterine membranes, and so allowed the liver to come in direct contact with the os uteri. The woman has had a smooth course towards recovery.

A circumstance which may account for this unnatural state of things is the fact, that during the earlier months of pregnancy (about the fourth or fifth month) she had to take care occasionally of a gentleman who died of convulsions, arising from albuminuria.

A question may arise as to the source of the hæmorrhage; from the quantity, as well as the clotted appearance, I am inclined to think some placental vessels may have been ruptured in the dilatation of the os.

PLATE I.

OBSTETRICAL TRANSACTIONS VOL XII

Dr W W Ibbins del. Dr Westmacott dirext

W. West & Co. Chromo-lith.

CASES OF CANCER OF THE WOMB SUCCESSFULLY TREATED BY BROMINE.

By A. Wynn Williams, M.D.,
PHYSICIAN, SAMARITAN FREE HOSPITAL, AND PHYSICIAN-ACCOUCHEUR, WESTERN GENERAL DISPENSARY.

As the details of the cases contain full particulars as to the mode of treatment, I shall at once proceed to their consideration, deferring any remarks until the cases have been read.

Case 1.—*Medullary cancer.*

Mrs. P—, æt. 30, mother of one child, consulted me May 16th, 1868; well fed, but of leucophlegmatic temperament. She complained of pain across the loins, extending down the thighs, causing a constant feeling of sickness; bowels much constipated, always acting with pain and difficulty; menstrual discharge regular but very profuse, lasting seven or eight days; constant leucorrheal discharge. Tongue furred, heart's action feeble.

On making an examination per vaginam the finger came upon an uterus lower than natural, with a protrusion of the posterior lip to the size of a walnut, hard and smooth, not very painful on pressure; anterior lip and body, although large, appeared healthy and readily moveable. On examining with the speculum, it was with considerable difficulty, although using a full-sized one, that I could get the posterior lip within the end of the speculum: when within there was seen a mass about the size of a walnut partially smeared over with a creamy-looking discharge; when this was wiped off with cotton wool, the tumour was seen to be glassy and white, with a few dark spots scattered over the surface; anterior lip swollen with open os. The appearance indicating the stage shortly preceding the softening and ulceration of a

malignant tumour (medullary carcinoma). She was ordered an aperient and to take a mixture containing Tinct. Ferri Perchloridi, Tinct. Nucis Vomicæ, and Spt. Chloroformi. I determined to inject the growth with a solution of bromine, which I did at her own house on the 19th, using the syringe handed round, made of glass and platinum, charging the syringe with a solution of Bromine, Bromi. min. xij ad Spt. Vini Rect. ʒj. I passed the syringe through the speculum down to the growth, which, however, I found so hard I could not get the point to penetrate, until I procured a pair of hooked forceps, with which I took hold of the neck, drew the womb forward, whilst I forced the syringe inwards with a kind of half screw motion to nearly half an inch. I, before forcing out the fluid into the tumour, covered the surface of the exposed parts with cotton wool saturated with a solution of carbonate of soda, and then withdrawing the syringe a few lines so as to free the point, forced the contents about twenty minims into the tumour, leaving the syringe in *situ* about two minutes. On the withdrawal of the point of the syringe a few drops of the fluid followed, but was immediately neutralised by the soda. As the patient complained of a good deal of pain, a quarter of a grain of acetate of morphia was injected under the skin of the arm, which soon sent her off into a doze.

May 19th.—On examination the surface of the tumour, to about the size of sixpence, was seen to be of an ashy colour, but the slough had scarcely begun to separate. She had not remained in bed, and was tolerably comfortable. Ordered to continue the mixture and to use an injection, by means of an india-rubber syringe, of Bromine min. xij, Spt. Vini Rect. ʒij, Aquæ Dest. ℥xvj, three times a day.

23rd.—The slough had not quite separated, but it could be seen to what extent the tumour had been destroyed, nearly one half consisting of the anterior portion. I determined not to wait for the entire separation, but proceeded to inject the other portion of the tumour, which I did by passing the point of the syringe through the opening already made and forcing it backwards and upwards, taking care not

to penetrate the mucous membrane covering the back of the tumour, using the same precautions as on the former occasion. Some of the bromine solution on pressing down the piston was forced through into the cavity already made. On removing the cotton wool the raw surface was seen as it were scorched. The patient complained of a good deal of burning pain, which was again relieved by the subcutaneous injection of morphia. She was also ordered Ext. Cannabis Indicæ gr. i, each night, if required.

29th.—The slough caused by the first injection had now separated, the other separating; any hard or suspicious-looking portion was touched with the bromine solution held in *situ* for a few minutes. She had not had occasion to take the pills. To continue remedies.

June 5th.—All the sloughs had now separated, leaving a large cavity. As there was still some suspicious-looking growth at the back part, it was again touched with the bromine solution.

12th.—The cavity was filled with healthy granulations, there being no appearance of disease. To continue the bromine injection and mixture.

19th.—Parts skinning over. From this time the wound rapidly healed and attained apparently a perfectly healthy condition. The patient visited me again in the May following, when I examined and found the parts quite healthy. I have not seen her professionally since, but have met her walking about apparently in perfect health.

Case 2.—*Medullary cancer.*

Mrs. L—, æt. 28, widow, mother of one child, consulted me May 7th, 1868. Had never enjoyed good health since her confinement nine years previous. Five weeks after confinement suffered from severe pain in the left side; six weeks after there was a great discharge of matter from the vagina. Has since then suffered more or less from pain and a discharge. Consulted me more particularly as to the propriety

of again getting married. Catamenia irregular, not profuse. Pain in back and loins running up to left side under the ribs. On examination the womb was felt low down in the vagina, moveable, with anterior and posterior lips large, hard, and protruding. Examined with the speculum the os was seen stretched out laterally with everted edges. Sides higher up, being pressed closely together by a tumour on either lip, the one on the anterior lip being the larger and of a more pearly appearance. Before proceeding to destroy the tumours by bromine I had recourse to leeching and other remedies, usually employed for the removal of chronic enlargement of the os and cervix, without avail; and as matters were certainly getting worse instead of better, I determined on June 17th to attempt the removal of the growth in the anterior lip by bromine. This I proceeded to do by applying over it cotton wool saturated with bromine solution (ℳxij ad ʒj), by means of a vulcanite cup, taking the usual precautions to prevent injury to the adjacent parts. The bromine was kept applied for two hours at my own house, the patient residing some miles off. On the removal of the cup, &c., the tumour was seen to be whitened as if scorched. The patient complained of a good deal of pain during the application, but was able to proceed home in a cab. She was ordered to inject a weak bromine lotion, and to take a mixture with Tinct. Ferri Perchloridi, &c., and also, if required, every night Ext. Cannabis Indicæ, gr. j.

June 23rd.—Slough not yet separated, which appeared to include nearly the whole of the tumour. To continue remedies.

26th.—Slough not entirely separated.

30th.—More than two thirds of the tumour removed, but the base of the tumour was unduly hard. A piece of cotton wool was now dipped in the strong solution, and kept applied to the wound for about ten minutes, the evaporation of the bromine being prevented by covering the wool, &c., with gutta-percha sheeting. On removal the wound was observed to be well scorched. The bromine and spirit was again applied on July 3rd, 7th, and 10th; on the 15th all the

granulations appeared healthy, and the wound was allowed to heal, the injection of the bromine lotion being continued.

July 18th.—Wound healing.

22nd.—Nearly healed. Informed my patient I should proceed to destroy the other growth on the following visit, but she never appeared, and I saw nothing of her for twelve months, when, on the 31st of July, 1869, she again paid me a visit. She informed me that family matters had necessitated her instant departure from London, and that she had not had time to communicate with me before leaving. She also informed me that she had got married, but had suffered from wretched health ever since I had last seen her,—indeed, had been too ill to return to London. She had been suffering from an attack of ague and rheumatic fever, for which she had been attended by a medical man in the country, but never mentioned her uterine ailments. She had suffered much from pain in the back, loins, &c., and irregular menstruation, sometimes very profuse, at other times very slight and coming on at irregular intervals. After recruiting her health by rest, nourishing diet, tonics, &c., I proceeded on September 1st to destroy the tumour in the posterior lip, which had considerably enlarged during the last twelve months, being also of a more pearly colour, with here and there a few dark spots. There was also considerable creamy discharge. The same means were adopted to destroy this tumour as had been used on the former occasion. The patient was allowed to leave town apparently quite well on the 21st of October. I have not heard of or from her since. I must just remark that there was no appearance of the return of the disease in the anterior lip.

Case 3.—*Epithelial cancer.*

Mrs. B—, æt. 49, presented herself before me at the Samaritan Hospital, February 13th, 1867. Mother of several children; had ceased to menstruate. Complained of pain in the back, &c., and great irritation in the genitals caused by the acrid discharge. On examination there was found

sprouting out from the side of the os uteri a bright red growth, broader at the extremity than at the base, the extremity spreading out exactly like a branch broken from a cauliflower, bleeding readily when touched, and having a velvety feel. I diagnosed it to be an epithelial cancer in its commencement. To it the strong bromine solution was applied by means of cotton wool, &c., and was left in contact for about half an hour. She was also ordered to inject the weak bromine lotion. The same process was gone through on the 19th and 26th. On March the 5th there was none of the outward growth remaining, but the depression or stump, so to speak, was very red and hard. A bit of cotton wool rolled round the point of a stick wetted with the bromine solution was inserted into the depression, and held there for twenty minutes. This procedure was repeated on the 12th and 19th. The strength of the lotion was now reduced by one half, and she was ordered Ol. Morrhuæ ʒij twice a day.

March 26th.—The hole was now about an inch deep, with no appearance of disease. She was ordered to inject a simple lead lotion, and by May the 9th she was to all appearance quite well. Dismissed, with strict injunction to show herself from time to time, which she did up to the end of June. On the 25th the spot from whence the growth had been removed felt hard and looked very red. She was ordered Liq. Arsenicalis min. v, twice a day in water, and to inject the bromine lotion.

July 9th.—Tumour evidently growing again. I now determined to inject the strong solution with the syringe, and forcing the point of the syringe through the centre of the growth to the depth of two thirds of an inch, forced in as much of the fluid as I could. To continue the arsenical solution and the injection, and to take Pulv. Ipecac. comp. gr. x each night if in pain.

19th.—The growth was again injected, the syringe being passed through the opening already formed to the depth of fully an inch.

30th.—The hole formed by the separation of the slough was nearly an inch and a half deep, and as the bottom

felt to the probe somewhat hard, the bromine solution was applied by means of cotton wool, and again on August 6th. The arsenical solution was now discontinued, as it caused griping. After this date it was not considered necessary to apply any more of the strong solution, and the wound was allowed to granulate, using only the bromine lotion. I must here remark that the solution had never penetrated the canal, and that the growth appeared to have had its origin in the vicinity of the inner os. The patient continued under observation for some weeks after the wound had healed. I also saw her several times the year following, and up to the present time I believe there has been no return of the disease.

Case 4.—*Epithelial cancer.*

Mrs. M—, æt. 33, presented herself at the out-patient department of the Samaritan Hospital, February 11th, 1868. Has been married twice and had seven children; age of youngest four years. Was delivered of a dead child last November; present husband a sweep. Has been an inmate and out-patient at several hospitals, where, as she states, she was treated for consumption, the state of the womb never having been examined. She complained of pain in the left side which went through to the back, also pain in the lower part of the abdomen, thighs, back, &c., and a great discharge, very acrid and somewhat offensive. Catamenia natural. A tumour could be felt on the anterior surface of the neck of the womb, commencing near the os and extending upwards as far as the reflexion of the mucous membrane to the vagina, which felt rough and velvety, not painful to the touch, but bleeding rather readily when handled. The womb was somewhat enlarged but moveable. On looking through the speculum a growth very much resembling sweep's cancer, as seen on the scrotum, was observed, only of a more vivid red colour. The surface was not much elevated, and was of greater extent than the base, as a probe could be readily passed under its several lines. The vagina having been protected with soda,

&c., the strong bromine solution was placed over the surface of the growth, and covered over with gutta-percha tissue, and fixed by filling the speculum with cotton wool, the whole being left there about an hour. On removal the growth was seen to be whitened over its whole extent. She was ordered to take a chalybeate mixture, and inject the bromine lotion three times a day. By the 21st the slough had separated, when the strong bromine solution was again applied in the same manner.

April 25th.—The surface of the tumour having been nearly all destroyed, the base was now injected with the strong solution. As the lotion caused a good deal of smarting, it was ordered to be discontinued and warm water to be substituted.

February 28th.—Had suffered a good deal of pain, bowels constipated, was ordered a pill containing Ext. Cannabis Indicæ gr. i, Ex. Colocynth co. gr. ii, every night.

March 6th. — Slough caused by injection not yet separated.

15th.—Slough separated, suspicious-looking parts touched with the strong solution.

19th.—Touched again, and ordered to resume the injection of the lotion. It is unnecessary to follow the particulars of the case further. I need only remark that under the use of the lotion the wound filled up, and the patient got quite well, and in the following year, having removed to the country, was delivered of a living child, which died some months after birth. She is now again near her confinement, if she has not already been confined. She has had no return of the disease.

Case 5.—*Colloid cancer.*

My notes of this case have unfortunately been mislaid, and I can only relate from memory. Mrs. M—, aged about 23, widow, mother of one child, came to the Samaritan Hospital in October, 1867. She complained of the usual symptoms, great pain in the back, left side, and down the thighs, with constipation and pain on defecation. The posterior lip and

neck of the uterus was found to be occupied by a tumour the size of a large marble, with two smaller ones on either side, the uterus being quite moveable. The larger was dense and fibrous-looking: the smaller ones semi-transparent, and evidently contained fluid. There was some doubt as to the nature of this case, whether or not it was simply fibro-cystic or cystic cancer (colloid). I therefore determined to puncture the smaller cysts and make a free incision into the larger tumour, expecting to find a cyst in this also. The smaller growths when punctured discharged a glairy-looking, transparent fluid. The larger one was dense, and contained no fluid. A bit of cotton wool, dipped in the acid nitrate of mercury, was inserted into the cuts, and she was ordered to inject warm water, and to take a chalybeate mixture and a pill each night, with Ext. Cannabis Indicæ and Ext. Colocynth co. The acid was applied on several future occasions with the effect of apparently destroying the whole of the growth, and she was dismissed cured. She, however, returned in about three months, complaining as much as ever. A hard, firm mass was now found to occupy the site of the former tumours. This I injected with the strong bromine solution some three or four times. The bromine solution was also frequently applied by means of cotton wool, &c. The vagina was also washed out two or three times a day with the bromine lotion. She was ordered various tonics and sedatives, and ultimately got quite well and took a situation. Has had no return, but, as I have been informed by the nurse, has taken unto herself another husband.

Case 6.—*Malignant disease after operation.*

Mrs. L—, æt. 39, mother of four children, came under my care at the Western General Dispensary in April, 1865. Three years previous to my seeing her had been an in-patient at the London Surgical Home, where she states she had a tumour removed from the womb by Mr. Baker Brown, and remained there two months. Afterwards continued to attend

as out-patient for five months, when she was again readmitted for another month, then again became an out-patient, and so continued until February, 1864, when she became an in-patient at the Samaritan Hospital under Dr. Routh, who, as she states, burned her with hot irons. She continued to attend as out-patient for some time after her dismissal, but not being, as she fancied, benefited, discontinued her attendance. In April, 1865, she came, as before stated, under my care. She was pale, but not emaciated, and had continued to go about contributing to the support of her children by needlework, her husband having left her. She complained of pain in the back and loins, extending down the thighs. She also complained of great pain in the region of both ovaries, these pains being much aggravated during the menstrual flow, which was very profuse. On examination the neck of the uterus was found to have been entirely removed. A roughened surface could be felt round the remains of the os, with a ring of cartilaginous hardness surrounding this again. The womb was moveable. The sound showed the length of the remaining portion to be about an inch and a half. The os was seen to be surrounded by a wound covered with coarse granulations about the size of a shilling, enclosed within a white ring exactly like what is seen when cancer returns in the cicatrix after amputation of the breast. She continued under notice for about two months without any particular treatment. She took various tonics to recruit her health; opiates to relieve pain. The wound was occasionally touched with nitrate of silver, and sedative injections were thrown into the vagina. On June 8th I determined to attack the disease with bromine, saturating some cotton wool with a spirituous solution of bromine, ♏v ad ʒj. I placed it carefully over the wound, covering it again with gutta-percha tissue. This plan of treatment was followed up for nearly another two months, the wound being on the point of healing, and then appearing as bad as ever. With many misgivings, and fully explaining to my patient that she would be running some risk, I made up my mind to inject the outer side of the hardened cicatrix with a strong solution of bromine, Bromi.

ℳxij, Spt. Vini Rect. ʒj, which I proceeded to do on August 10th in the following manner:—A small exploring trocar was forced in to about a third of an inch, the mucous membrane having been protected by cotton wool, wetted with a solution of soda; a few drops of the solution were forced down the canula by means of a subcutaneous syringe, first on one side of the womb, then on the other.

August 17th.—Sloughs not separated. The effect could be seen to be satisfactory; I, therefore, did not wait for their separation, but injected again in the same manner the anterior and posterior sides. A good deal of the injection evidently returned by the side of the sloughs caused by the previous injection, and I now felt hopeful that all the hard parts would separate with the slough.

31st.—I was pleased to find the sloughs had completely separated, and had left a clean, raw surface of the size of half a crown, and not quite half an inch deep. As the deeper portion still looked and felt rather suspicious, the bromine solution was applied to it; a piece of wood was passed through a small vulcanite cup, round the end of which some cotton wool was twisted, wetted with the solution, and passed through the speculum, and inserted into the wound, and held there by the nurse for nearly an hour; the slough caused separated by the 31st. During the whole of this treatment she had been injecting a bromine lotion into the vagina of the following strength, Bromi. ℳxx, Spt. Vini Rect. ʒss, Aquæ destil. ℥xvj twice a day; and taking at night either Ext. Cannabis Indicæ, gr. ij, or Morphiæ Hydroch., gr. ss, and various tonics, chiefly chalybeates, together with nourishing diet, brandy, wine, &c. She was never so far laid up as to prevent her attending regularly at the Dispensary, and looking after her household. From this time the wound steadily granulated up under the use of the bromine lotion, the strength of which had, however, to be occasionally lessened, owing to its causing too much irritation. By the end of the year she appeared so well that I considered her further attendance unnecessary. She visited me occasionally during the next five years, and it was not until the end of the year

1869 that I perceived any return of the disease. On December 23rd I noticed a small indurated spot on the side of the canal, but as it was not ulcerated, I thought it advisable not to interfere with it. She was ordered to inject a lotion containing tincture of iodine, and to take a mixture with Potassii Iodidum and Tinct. Cinchonæ. Matters, however, did not improve, although Liq. Arsenicalis was substituted for the Potassii Iodidum. In the latter end of March the point ulcerated. To this the strong bromine solution was applied. This solution had been mixed for some months, and had almost entirely lost its colour; the bromine had evidently been converted into hydrobromic acid, and probably bromide of ethyl. Cotton wool was dipped into this solution, and kept applied to the part for about half an hour. On removal the whole surface where it had been applied was whitened and scorched. By the following week this slough had separated, or so nearly, that I removed it with the forceps, and was about two lines in thickness. This solution had in fact acted quite as powerfully as if it had been mixed fresh, if not more so. The same process was again gone through with a similar result. The bromine solution was not applied again. The wound was permitted to granulate over, the weak bromine lotion being injected twice a day. Whether or not the disease will reappear it is impossible to predict. I have, however, the satisfaction of feeling that through the treatment adopted she has been spared to her children fully five years, and there is every probability that she will be spared at least another five.

Case 7.—*Malignant disease after operation.*

The particulars of the following case were given to me by my friend Dr. Murray, with whom I saw the patient.

Mrs. B—, æt. 43, gave the following history of herself: Married, mother of three children, subject to fits since childhood. At the age of thirty began to have a white discharge, which gradually increased up to the time of having the last child, being then thirty-four years of age; from that time

suffered much from debility. About four years ago the discharge increased and was streaked with blood; this continued for about six months, when she consulted Dr. Murray, who diagnosed the case to be one of epithelioma in a state of ulceration; various remedies were tried for the space of three months without any permanent relief. The discharge now came away frequently mixed with large clots of blood, and was of so irritating a character as to "take the skin off the thighs." She had become very weak and emaciated. Dr. Murray now determined on removing the neck of the uterus with the single wire écraseur, which was accordingly done.

June 5th, 1867.—She lost a good deal of blood the same night. Three days after had an attack of diarrhœa. In the course of a fortnight or three weeks the wound healed and she rapidly regained strength. She remained well, with the exception of occasional pains in the back until the end of the year 1868, when she had a severe attack of hæmorrhage. Many of the old symptoms now returned, but not to the same extent as previous to the operation. She again consulted Dr. Murray, who found on examination that there was evidently a return of the disease. A hard fibroid-looking mass occupied the posterior part of the stump of the neck of the uterus; to this Dr. Murray applied, on several occasions, the strong solution of bromine, swabbing it over with it. This caused some superficial sloughs, but the case did not make as much progress as he wished. In order to eradicate the disease Dr. Murray came to the conclusion that the base of the tumour must be attacked, and for this purpose asked me to see the case with him, which I did at his own house.

January 8th, 1869.—I recommended the application of the bromine by means of the vulcanite cup and cotton-wool, which was done in Dr. Murray's consulting room and kept applied for about half an hour.

22nd.—The slough caused by the previous application had separated, but it had not destroyed as much of the tumour as we anticipated. It was therefore determined to inject some of the strong solution into the tumour. This was accordingly

done in the usual way. The patient was also ordered to wash out the vagina with the bromine lotion.

February 12th.—Much of the tumour destroyed; again injected; no further injection required. The wound was allowed to granulate under the use of the bromine lotion. Dr. Murray informs me that when he last saw the patient, very recently, she continued well.

It must, I think, be admitted that cancer of the womb, when it comes sufficiently early under the cognizance of the physician, is amenable to treatment, or, at any rate, certain forms of it. My own opinion is most decided that cancerous growths or formations situated in the lips or neck of the womb can be successfully eradicated when confined to this part only and previous to the commencement of ulceration. The fact of ulceration having set in must not be considered by any means as precluding any attempt being made for the removal of the disease; on the contrary, as long as the womb is moveable and the glands and other parts apparently healthy, the fact of ulceration having commenced should be an incitement to immediate action. In point of fact the earlier the disease is discovered and active measures taken the better are the chances of the patient's recovery. No evil can possibly accrue, even supposing the tumour operated on should not be malignant, as it is certainly as ready a mode of getting rid of it as any other with which I am acquainted. The manner in which the disease shall be dealt with will necessarily vary in different cases. The more superficial, as some of the epithelial varieties, will be best destroyed by saturating cotton wool with a strong spirituous solution of bromine, placing over it a vulcanite cup or gutta percha; any stump left must be treated as the more solid tumours and injected. The solid fibroid growths are best treated by injection of their substance, and for this purpose a small trochar and canula, to which a glass syringe can be attached, answers best. It is not easy to force the point of a syringe into the more solid growths, and, further, it is by no means easy to force the fluid into the tumour. Without freeing the point of the syringe all attempts to force out the contents will be

futile. To do this the syringe must be withdrawn a line or two. On the other hand, with a fine trochar these difficulties do not occur, the steel point is readily forced in, and when withdrawn leaves a space beyond the end of the canula.

The strength of the solution I now invariably use as an escharotic is twelve drops of bromine to a drachm of rectified spirit of wine. This proportion I find to act far more powerfully than does pure bromine. It is not necessary to mix it immediately before use. I find that when it has been mixed even weeks and months its escharotic properties seem to be just as powerful as they were when the solution was first made, even though it may have almost lost its colour. This is no small boon to the operator, as the smell and irritation caused by the escape of the fumes of bromine from the recent solution is most distressing and, at the same time, very injurious. The fumes of bromine have so weakened the delicate structure of my olfactory nerves, that I have been for many months without the sense of smell; it is now returning, though very slowly. Before manipulating with bromine I now take the precaution of moistening some cotton wool with a solution of soda and placing some of it in each nostril. I am not at all satisfied in my own mind as to what is the nature of the change that takes place when bromine is mixed with rectified spirit of wine. There is effervescence with evolution of heat. After a time the liquid, although stoppered ever so carefully and kept in the dark, gets paler and paler, but the loss of strength by no means keeps pace with the loss of colour. Probably we have bromide of ethyl and hydrobromic acid formed. On making trial with pure hydrobromic acid I was surprised to find it very feebly escharotic. It is advisable that the solution should always contain some free bromine. I must not forget to mention that the injection of the bromine lotion into the vagina is a very essential part of the treatment; I find the surface of the wound under its use always clean and having no offensive smell. It was by observing the beneficial effects in open cancers in other parts that I was induced to employ it in diseases of the womb.

I am, as many of you are aware, a great advocate for the application of weak solutions of iodine to scrofulous ulcers, and in this way I was led to try the effects of bromine on cancerous sores. This happened some twelve or fourteen years ago, when practising in the country. After leaving the country on account of ill health several years elapsed before I had an opportunity of carrying on further experiments. It was not until I became attached to the Western General Dispensary that such an opportunity occurred, and it was at this institution that I first injected a spirituous solution of bromine into cancerous tumours.

Some of the results of this plan of treatment you have heard; whether the plan can be advantageously adopted when cancer affects other parts is still to be proved. I have never been able to give it what I consider a fair trial, the cases have been all too far advanced; nevertheless the results have not been void of promise. The internal exhibition of bromine has not been sufficiently tried. I have ordered it on one or two occasions, but only for a short time; its use, to be of benefit, would, I should suppose, require a long continuance. The most convenient form of administering it is to mix it with glycerine and water; thus mixed it is not unpleasant to take: one patient considered the taste not unlike raspberry vinegar.

Dr. Playfair said that the obvious criticism on Dr. Williams' paper was, that his cases afforded no conclusive proof that they were malignant at all. Dr. Williams said that his treatment was only applicable in medullary carcinoma, when the uterus was freely moveable. Now, according to his (Dr. Playfair's) experience, it was the rarest thing in the world for us to be able to recognise malignant disease unless it had advanced so far as to cause fixature of the uterus. No doubt there was an early stage in which carcinoma was limited to the cervix alone, but practically it was rarely, if ever, detected so early, and, in the absence of fixature, there could be no certain means of distinguishing between hypertrophy of the cervix from chronic uterine disease of a benign and of a malignant nature. These remarks, of course, do not apply to the cases of epithelioma, in which, no doubt, the bromine was very serviceable, but in other cases the accuracy of the diagnosis seemed to him very questionable.

Dr. PALFREY rose for the purpose not only of confirming the doubts which had been expressed by Dr. Playfair as to the correctness of the diagnosis of three of the cases narrated by Dr. Wynn Williams, but also to put to that gentleman two or three questions which had occurred to his mind while listening to the paper. Upon the first point he begged to ask Dr. Williams if he was prepared to afford the Society any additional evidence other than that already given in respect to the diagnosis of those cases in which Dr. Williams had stated that at 30 23, and 28 years respectively the patients had consulted him for cancerous disease of the uterus; to his (Dr. Palfrey's) mind the evidence the author afforded was of but very little value. He spoke of hardness, a peculiar colour, pain, discharge, &c., but he also stated that in each instance the uterus was freely moveable. Now, it might, and in his case probably did, arise from a limited experience; but certainly he could remember but three cases of uterine cancer at this early age which had fallen under his notice, and which he could declare to be really malignant, for he had always regarded fixedness of the organ to be one of the most reliable signs of malignant deposit in the uterus, and he would be very sorry indeed to express a positive opinion that any young woman of 28 or 30 years of age was the subject of so grave a malady upon such slight evidence as the author had adduced that evening. He (Dr. Palfrey) was equally sceptical as to the wisdom of the author's treatment, and he would remark in passing that this treatment of malignant disease of the uterus was by no means new to the Society. To Dr. Routh was undoubtedly due the credit of first introducing to the Society's notice (which he did in a very excellent paper read before them in October, 1866) the application of bromine to a cancerous cervix, but even for a moment assuming that the cases Dr. Williams had narrated were all of them of a malignant nature, was the author prepared to affirm that this powerful solution of bromine excited any action peculiar to itself upon the diseased mass? If the author did make that statement he (Dr. Palfrey) would assure him that he was labouring under a mistaken notion, as was proved by some experiments he carried out soon after Dr. Broadbent introduced the treatment of cancer by the injection of acetic acid. At that time he had in numerous instances with Dr. Broadbent's syringe injected into the centre of the cervix (in each case where the disease was much marked) solutions of various substances: Perchloride of Iron, Iodine, Mercury, and even a strong solution of Carbonate of Soda; and in every instance with the result of setting up in the tissue into which the injection was made an amount of destructive inflammation so profound that the portion injected died; a slough formed,

this subsequently contracted and healed, and for a time of varying duration the sufferer was immensely benefited, her health renewed, and her local conditions improved; now, this he believed to be the explanation of the process that had attended Dr. Williams' injections. Finally, he (Dr. Palfrey) must again express his regret that upon such slight grounds the author had declared three of his cases to be of a malignant character, and he repeated that, unless Dr. Williams had far better proof to place before the Society than he had afforded them that evening, he (Dr. Palfrey) should most certainly dispute the correctness of the diagnosis in each of those three cases.

Dr. Cleveland, though practically unacquainted with the merits of bromine injections, wished to call the attention of the Society to the cases of supposed cancer of the uterus published by the late Dr. Ashwell, of Guy's, in which the topical application of iodine by the tincture and strong inunction was thought by him in many instances to be curative. He said it was now generally considered that Dr. Ashwell's cases were rather those of chronic congestion, hypertrophy, and induration, than of a truly malignant character; but he did not desire to institute a comparison between them and those brought forward by Dr. Williams, or in any degree disparage the latter gentleman's researches.

Dr. Rogers had used bromine in six to seven cases of uterine cancer at the suggestion of his colleague, Dr. Routh, but they were all in an advanced stage of disease; when they came under his care, there was ulceration, and the uterus was in all the cases fixed. The bromine was applied freely and repeatedly by lint or cotton wool, and the diseased tissue was destroyed as far as possible, but only temporary relief has been obtained. The sanious and fœtid discharges were greatly lessened and improved; hæmorrhages were arrested in some cases for months, and pain considerably diminished: but as he (Dr. Rogers) never injected bromine into the uterus itself, as Dr. Williams had done, and as no case came under his care at a very early stage, he could not record, like Dr. Williams, any cure; but he (Dr. Rogers) had freely and repeatedly injected the bromine into a schirrous breast, but always under chloroform, as the patient was very violent and required powerful doses of narcotics to allay it, even after the effect of the chloroform had gone off. He (Dr. Rogers) regretted to say that he had been informed this patient had died of the disease, therefore bromine had not been in his hands of any lasting benefit, and he thought this remedy would not prove more successful than other caustics which had been also greatly vaunted as cures for cancer.

Dr. Williams stated, in his reply to Dr. Playfair and others, that surely there must be a time in the early stages of the disease

when it was confined solely to the neck of the uterus; such was the case in the mammæ and other parts of the body. Why not, then, in the uterus? No doubt there was great difficulty in diagnosing cases of malignant disease, especially the more solid forms, from non-malignant growths, but, after all other remedial measures have failed, he considered it quite justifiable to treat them as malignant. The great superiority of this mode of treatment over the écraseur and the knife was, with these you were never sure that you had removed all the diseased parts. With the bromine you could inject again and again, until you felt satisfied that you had got to the root of the evil, as many of the cases fully demonstrated. As to the appearance of the parts left after this treatment, it was such as would be seen after the removal of a slough or core from any other part of the body. As regards the statement by Dr. Palfrey, Dr. Williams most emphatically denied that Dr. Routh was the first to treat those cases with bromine and spirit. Dr. Routh had recourse to its use after Dr. Williams, and at his suggestion; and as to the injecting of growths in the neck of the wound, no cases had ever come under Dr. William's cognizance as ever having been done by any one else, even up to the present time.

SPECIAL GENERAL MEETING.

June 15th, 1870.

Dr. Graily Hewitt, President, in the Chair.

Present—39 Fellows.

After some introductory remarks by the President, stating that the object of the Special Meeting was to consider the Scheme of Amalgamation lately proposed by the Royal Medical and Chirurgical Society, and giving a detailed account of the various circumstances connected with the action of the Delegates and Council, and explaining the manner in which the Obstetrical Society would be affected by the scheme, several letters from absent Fellows were read, all, with one exception, being opposed to the amalgamation.

The following Resolution was then proposed by Dr. Tyler Smith, and seconded by Dr. Tilt:

"That this Society, having regard to the interests of the Department of Medicine to the cultivation of which it is devoted, declines to accept the Scheme of Amalgamation offered by the Royal Medical and Chirurgical Society; but would still be willing to negotiate for an amalgamation on the basis adopted by the delegates from all the Societies."

After some remarks by Dr. Day Goss, Dr. Routh, and Dr. Murray, Dr. Savage proposed as an amendment, with a view to prevent any further attempt at negotiation, "That the concluding paragraph of the Resolution be omitted." This proposition, however, was not seconded, and remarks in

favour of the Resolution as proposed were made by Dr. Cleveland and Dr. Heywood Smith.

It was then moved by Dr. Snow Beck, and seconded by Dr. Routh—

"That as a majority of this Society reside out of town, and cannot attend this meeting, it is desirable to obtain the expression of the opinion of each of the Fellows by a printed circular, before any decided resolution be adopted as to the amalgamation with the Royal Society of Medicine."

After considerable discussion it was, however, ruled by the President that this proposition could not be put to the meeting, upon which Dr. Beck intimated his intention of forwarding a protest to the Council against the President's ruling.

Remarks adverse to the proposition of Dr. Tyler Smith were then made by Dr. Madge and Dr. Squarey; in favour of it by Dr. Rogers and Dr. Wynn Williams; and on the vote being taken it was carried with but three dissentients.

A vote of thanks to the Delegates was then proposed by Dr. Braxton Hicks, seconded by Dr. Murray, and carried by acclamation, after which the meeting adjourned.

JULY 6TH, 1870.

Dr. GRAILY HEWITT, President, in the Chair.

Present—34 Fellows and 7 visitors.

Mr. W. H. Causton, Kingston-on-Thames; Mr. W. A. Daniel, Kingston-on-Thames; and Dr. J. Scott, San Francisco, were elected Fellows of the Society.

Dr. BARNES exhibited an improved anti-hæmorrhagic case, prepared under his direction by Krohne and Sesemann. It contained a Higginson's syringe, three cervical caoutchouc dilators, a uterine tube, perchloride of iron, permanganate of potash and ergot. The improvements consisted, 1st, in making the uterus tube of vulcanite; in disposing the perforations at the uterus's end so as to throw the streams of injected fluid obliquely on the inner uterus's surface; in doing away with all metal in the apparatus, thus obviating corrosive action by the perchloride. 2ndly, in substituting the solid perchloride of iron for the solution, thus obviating risk of injuring the instruments by leakage. The bottles contained exactly the quantity (ʒij) necessary to make ℥x of the STYPTIC FLUID, and the permanganate bottle contained enough to make two injections of ANTISEPTIC FLUID; the ergot was in powder. Thus no fluid was contained in the case.

Dr. PROTHEROE SMITH exhibited his exploring needle trocars. Since he first showed them in 1867 he had considerably improved the instrument, which consisted of hollow steel needles, gilt, adjusted to a powerful glass exhausting air syringe, or, as it had been called, "pneumatic aspirator."

This, by means of a spring stop on the piston-rod, and a double action tap at its distal end, formed an air pump, which enabled the operator easily to explore distant or deep-seated tumours, and to withdraw their contents when fluid, as in cases of cysts, abscesses, &c., without pain or wound more than that of a pin. He had that morning, at the Hospital for Women, operated on a case of ovarian cyst too greatly adherent to admit of ovariotomy, and he had thus in a short time removed nine pints and ten ounces of a thick fluid without inflicting any wound but the prick of a needle. He had only last week explored in a lady a pelvic tumour of eighteen years' standing, which had always been supposed to be solid, but from which he had withdrawn a pink-coloured fluid, which, when examined microscopically by Dr. Wilson Fox and others, presented muscular fibres, hair, and granular matter floating in serum, showing it to be an old degenerated cyst. The operation was followed by marked relief. This instrument he had found of the greatest use in the diagnosis of tumours and in their treatment, since it not only enabled one to remove morbid matter, but likewise without shifting the needle to introduce by the same syringe iodine or any other remedy into cysts, abscesses, &c. It would be found of great value in psoas abscess, as the pus could be removed with impunity without risk of admitting air into the cavity. So slight was the irritation induced by the needles that they had been passed into the cavities of the brain, the pleura, pericardium, peritoneum, bladder and intestines, and so removing their contents whether fluid or flatus, and in the same manner and without injurious results the lungs, liver and kidneys had been successfully pierced. By such means we could efficiently operate without leaving a wound, after thus removing pus, dropsical effusions, and the flatus of tympanites without fear of injurious consequences. He had hoped to have exhibited a machine to-night which, by the aid of a needle trocar, would enable one easily and almost instantly to withdraw a quart of fluid at a time, yet was so constructed as to permit the escape of any less given quantity; the manufacturers, however, could not complete it in time, but he hoped

to exhibit it on some future occasion. For the purpose of diagnosing solid tumours he observed that he had invented another trocar, which gave one the power to cut at any given depth a pencil-shaped piece of any structure for microscopic or other examination. This was effected by a trocar with a double canula, near the point of which is a hole or fenestrum from which is projected, at will, a double tenaculum or harpoon by which the tissue is dragged into and secured in the fenestrum whilst it is cut off by the sharp edge of the outer canula which is slowly projected by means of a screw at the handle. When the specimen is thus secured and withdrawn with the inner canula, should there be any fluid contained in the tumour, as in fibro-cystic disease, it can be pumped out by the same air-pump or aspiring machine. Having found his needle trocars and air-pump of the greatest use in diagnosis and treatment in his own practice for the last four years, he was desirous again to bring it before the notice of the Obstetrical Society.

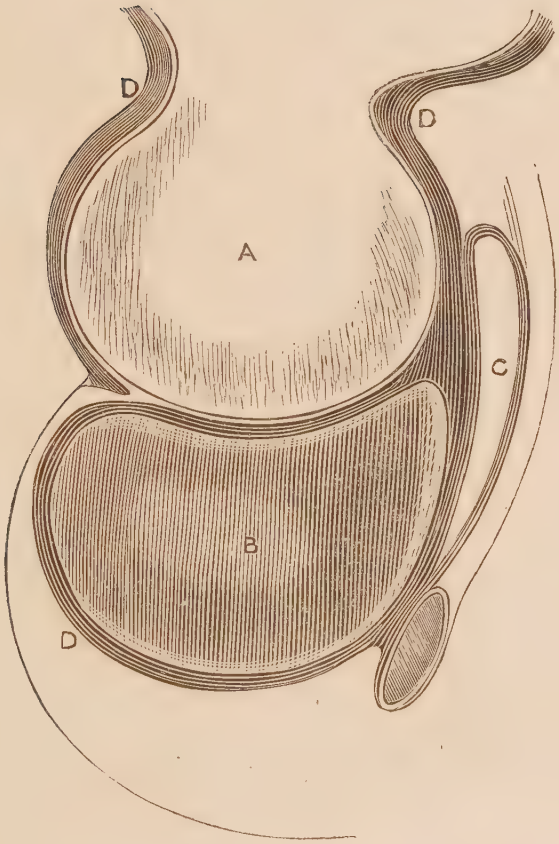
Dr. Braxton Hicks related the particulars of a case of labour obstructed by a large fibrous tumour in the anterior wall of the cervix and os uteri, which was removed by enucleation. The uterus, when he saw the patient, a multipara, at the end of twelve hours, was very firmly and continuously contracted around the fœtus. The head was at the brim, pressing against the upper aspect of a firm but elastic tumour, which occupied the whole upper vagina, so as to render it difficult to reach the head, and then only by introducing the whole hand into vagina. On tracing the os uteri, the tumour was found continuous with it, and it was not thus difficult to make out its true nature, although it had been mistaken at first, by the midwife who attended her, for breech presentation, and by some medical men for dilated bladder, which, indeed, it much resembled. However, the catheter drew off only a small quantity of urine, and it was clear that it lay posterior to that viscus. He (Dr. Hicks) thought that possibly version might succeed in delivering the fœtus, the tumour sliding up during the revolution of it. However,

this was impracticable from the excessively contracted state of the uterus, and its firm contraction round the neck of the fœtus, coupled by the impediment caused by the tumour. He made two well-sustained but ineffectual attempts at version, the patient being fully under chloroform; and then placed on the long forceps, but the height of the head would not allow the forceps to reach high enough to hold it firmly, so that he was obliged to give them up. Perforation with the craniotomy forceps or cephalotripsy was not likely to be more useful, because of the distance at which the head was placed, and because of the size of the tumour and the firmness with which the uterus was contracted round the neck of the fœtus; he therefore determined to try if the tumour could be enucleated. This he thought to be possible, having observed in other instances of the kind how very free these tumours lay within the capsule in this position. He therefore made a small opening by a bistoury into the lower portion of the swelling, and finding that it was likely to be enucleated readily, he dilated the opening, enucleated the tumour, and removed it without any great difficulty, further than its volume produced. No hæmorrhage occurred throughout nor after the process.

The fœtal head came quickly down into the brim, and to secure the command of delivery the forceps were applied, and after gentle traction, the child was delivered alive and hearty.

The patient bore no evidence in appearance and pulse of any shock having been given the system.

The microscopical examination of the tumour shows it to be composed almost entirely of connective tissue, with a few colossal fibres. The whole mass throughout liberally supplied with blood-vessels. It weighed above a pound and a half. This case went on remarkably well, so much so that, with the exception of a slight feverish attack on the third day, she gave no anxiety whatever. She called on Dr. Hicks at the end of a month. The state of the os and cervix was quite natural, no trace existing to show the magnitude of obstruction which had so short a time before prevented delivery by the natural power.



References to which letters on Diagram refer.

A. Child's head.
B. Tumour in anterior wall of cervix uteri.
C. Bladder.
D. Uteric wall.

It need hardly be pointed out to the Fellows of this Society that the only other means of treating the case would have been by removing of the whole mass by ecrasement, with the dangers attending the division of a base close to the bladder and peritoneum of at least five inches diameter; or by the Cæsarian section.

A CASE OF PROLAPSUS UTERI ENDING FATALLY BY DILATATION OF THE URETERS AND WASTING OF THE KIDNEYS.

By J. J. Phillips, M.D. Lond.,

ASSISTANT OBSTETRIC PHYSICIAN TO GUY'S HOSPITAL; ASSISTANT PHYSICIAN TO THE HOSPITAL FOR SICK CHILDREN; PHYSICIAN TO THE ROYAL MATERNITY CHARITY, ETC.

The fact that a case of procidentia uteri may prove fatal by inflammation and dilatation of the urinary passages is one which is scarcely referred to in any English text-book on the diseases of women; and, indeed, the extreme rarity of such an occurrence is a sufficient explanation of the omission. The subject has, however, not escaped the notice of Dr. West, who, in his classical work on Gynæcology, mentions such a termination as having been observed, though never by himself.

The connection of the neck of the uterus and the vagina with the bladder is, indeed, so intimate, that prolapse of the former organs must interfere in a greater or less degree with the functions of the latter; and when it is remembered that the part of the bladder which adheres to the vaginal wall includes the orifices of both ureters, it is rather surprising that in long-standing and neglected cases of procidentia, more serious urinary troubles are not frequently met with.

It is evident that urine may be retained in a prolapsed pouch of bladder, and lead not only to inflammation of its

mucous lining, but also to the extension of that inflammation along the whole urinary tract. M. Goupil refers to this complication terminating fatally by pyelitis, and points out that vesical calculi also may originate in the retention of urine in the pouched bladder. A case[1] is quoted by him in which there existed complete procidentia of the uterus and inversion of the vagina, and in which several calculi were found in the prolapsed bladder on the anterior surface of the uterus. The calculi were removed by urethro-vaginal cystotomy, and a post-mortem examination confirmed the diagnosis of cystitis. No mention is made of the condition of the ureters or kidneys.

M. Huguier also, in describing the pathological conditions which may coexist with hypertrophic elongation of the supra-vaginal portion of the cervix uteri and prolapse of the uterus, says, that in addition to the symptoms arising directly from the accompanying vesical displacement, all the complications of calculous cystitis may be met with. One case[2] especially which seems illustrative of the above statement is reported by him.

A patient, æt. 39, died three months after M. Huguier had removed a portion of the neck of her uterus. Prior to the operation there was complete inversion of the vagina, and a considerable portion of the bladder was displaced with it. This had existed for some years, and gave rise to much difficulty in micturition, and was attended with severe lumbar pains. On post-mortem examination it was found that all the pathological lesions were confined to the urinary organs. The bladder was contracted, its walls hypertrophied. It contained a small quantity of purulent urine, and an irregularly shaped calculus, the size of a cherrystone. The ureters were greatly dilated, and their walls thickened; they also contained some urine mixed with a large quantity of pus. The kidneys likewise were dilated, their normal

[1] 'Clinical Memoirs on the Diseases of Women.' Translated by A. Meadows, M.D. Vol. ii, p. 210.

[2] 'Mémoire sur les Allongements Hypertrophiques du col de l'Uterus,' p. 179.

structure was destroyed, and the cavities which they presented were filled with pus and urine.

It is, of course, open to question whether in this or in similar cases the formation of calculi is *secondary* to the vesical displacement and urinary retention. The weight of evidence, however, from the character of the calculi and the train of symptoms, seems confirmatory of this view.

There appears to be another manner in which prolapsus uteri may lead to fatal implication of the urinary organs, and the case to be related seems an example of this kind. The prolapsed bladder being pushed under the pubic arch, the ureters may be so pressed upon, by the remaining portion of the hernial mass, as to lead to their partial obstruction and subsequent dilatation.

The immunity of the ureters from any serious organic changes, in the large majority of cases, is probably due to the fact that the vaginal and vesical prolapse takes place in a very gradual manner, and in this way the ureters become elongated and adapted to their altered position, and also that in most cases of procidentia not only is there a wide pubic arch, but there exists much laxity of the soft parts.

Virchow, in the 'Transactions of the Obstetrical Society of Berlin' for the year 1847,[1] called attention to this compression of the trigone of the bladder, under the symphysis pubis, in cases of procidentia uteri, leading to fatal hydronephrosis; and pointed out that thus occasionally we meet in cases of prolapsus with a complication not by any means uncommon in cancer of the uterus, either from direct pressure on the ureters by the cancerous organ, or closure of their vesical orifices by malignant deposit.

Kiwisch also, in his 'Clinical Lectures,' mentions this termination as sometimes resulting from pressure on the ureters by the procident uterus.

M. A—, æt. 35, was admitted into Guy's Hospital on the 28th of May, 1869, under the care of Dr. Fagge, who has

[1] 'Verhandlungen der Gesellschaft für Geburtschülfe in Berlin,' vol. ii p. 209.

kindly permitted me to bring the case forward. She was the mother of four children, and since the birth of the first had suffered from prolapse of the uterus. Her friends stated that her health had been impaired for a long time, and that she became worse a week before admission. Her face then swelled and was inflamed, and she was light-headed, thirsty, and feverish. Although she had suffered much from frequent and painful micturition, she did not complain of any difficulty in passing water during her short stay in the hospital. On admission she was shivering violently, and had a typhoid state about her. Her tongue was brown and dry; the face had an excited look, but her mind was clear. The skin of the abdomen was much pigmented, there was no special tenderness, and there were no petechial spots. The chest sounds were normal. Pulse 122, respiration 16 per minute. The skin was dry, she complained of feeling cold. Temp. 97·4°. Conjunctivæ œdematous. The urine was found on standing to deposit a sediment equal to one third the quantity of urine; this formed a tenacious mucus with liquor potassæ, and under the microscope exhibited an abundance of pus-corpuscles. She complained of tenderness on pressure in the right lumbar region.

The compound jalap powder and a diaphoretic mixture were ordered, but the patient became drowsy and died comatose the second day after admission.

The post-mortem examination was conducted by Dr. Moxon. The cerebral membranes were a little thickened, but the brain was healthy. The heart was coated thickly with fat, which evidently invaded the muscular tissue at certain parts. The liver was healthy. The spleen weighed eight ounces, it was firm, yielding a little pulp on scraping it. The kidneys were both in a similar state, the capsules adherent, the tissue very much reduced, and the pelvis much dilated. The pyramids were quite flattened down and reduced to the state of hollows; the only remaining parts of the kidneys that appeared at all capable of function were the interpyramidal columns. These were hard and pale. Iodine did not show lardaceous disease in them. The quantity of

parenchyma left was not one fourth of the whole, and it had quite lost its visible structure. The mucous membrane of all the urinary passages was thickish, and its surface marked with congested capillaries. The ureters were so distended that one's little finger would easily enter them. The whole of these passages were full of milky-looking purulent urine. The bladder was also full of this. Its walls were hypertrophied, but its mucous membrane was less altered than that of the rest of the urinary channels. The uterus was small. It was prolapsed so that a tumour, the size of an apple, projected from the vulva. The urethral orifice was so placed that it opened in the receding angle between the prolapsed organs and the anterior vaginal wall. This, however, could hardly be called a receding angle, as the vagina was turned almost completely inside out. The prolapsed mass consisted of the neck of the bladder, and a portion of its hinder wall as far as the spot corresponding to the middle of the uterus, this being in the anterior half of the polypoid projection, while posteriorly it was made up of the hinder wall of the vagina, with the peritoneum of the recto-uterine pouch much thickened. On the pelvic aspect this peritoneum showed a ring, apparently muscular, that surrounded the neck of the part of peritoneum that descended into the tumour. There were many thick muscular bands in the subperitoneal tissues of all these parts. The neck of the uterus ran down the centre of the mass, and it ended in the os, which projected a little on the middle of the lower surface of the tumour. On probing the ureters they were found to descend with the bladder, so that their orifices came under the pubic arch along with the fundus of this, and were there subjected to pressure.

The specimen has been added to the Museum of Guy's Hospital, and is now exhibited to the Society.

AIR IN THE VAGINA.

By Adolph Rasch, M.D.,

PHYSICIAN FOR DISEASES OF WOMEN TO THE GERMAN HOSPITAL, AND PHYSICIAN TO THE TOTTENHAM TRAINING HOSPITAL.

In this paper I intend to examine those cases only in which air is expelled from the vagina, and where no abnormal communication exists with the intestines.

Although the fact must be familiar to all who have the care of a large number of female patients, the text-books either do not mention it, or, if they do so, fail in scientifically explaining it. Some years ago a case was brought before this Society by Dr. Harley ('Obst. Trans.,' vol. iv, p. 173), in which the air expelled from the vagina was a cause of great discomfort. The author proved that the air did not come from the retroverted uterus, but from the vagina, which I presume was rather flaccid, the patient having borne three children, and being otherwise in bad health. Dr. Harley believes that the air was sucked up and expelled by a spasmodic action of the vagina. He further observed that the abdominal muscles materially assisted in producing this result, and, although the patient had not the power of commencing the action, once it had begun and gone on for a few minutes, she had the power of continuing it. Tonics and astringent vaginal injections cured the patient in a few weeks. The position of the patient during Dr. Harley's experiments is not mentioned.

Dr. Druitt related on the same occasion a similar case and attributed the want of sexual feeling and discharge of air to relaxation. "Air would readily enter a relaxed vagina in large quantities, for example, when a woman was placed on her hands and knees for examination." Dr. Druitt does not explain what causes the air to enter.

Dr. Graily Hewitt considered that air passed into the vagina by a kind of suction movement. "The rigid flat roof of the vagina, constituted by the indurated cervix, acted

as a dilator of the vagina; when, during certain movements of the body, the uterus was drawn upwards, air entered the vagina." Dr. Hewitt does not repeat this theory when briefly noticing Dr. Harley's case ('Diseases of Women,' 1st edit., p. 352).

Dr. Braxton Hicks believed that in lying down the weight of the uterus caused it to fall back on the sacrum, whereby air was drawn in, while on assuming the erect position it was expelled again by the descent of the uterus.

Dr. Marion Sims, whose valuable speculum owes its usefulness to the air entering the vagina, was not more fortunate in explaining the modus operandi of the air than the other authors quoted. For he believes that, in distending the vulvar introïtus air rushes in with the full power of fifteen pounds to the square inch—a force which would be more than sufficient to tear the vagina from all its attachments. It is strange that so acute an observer was not struck with the fact that this enormous power, which he believed to act on the vagina, was impotent when he opened the vagina of a female on her back.

Dr. Routh, in the discussion following Dr. Copeman's paper on "Imperforate Hymen" ('Obs. Tr.,' vol. x, p. 258), remarked "that the vagina during the act of inspiration, being pressed upon by the intestines, had the power to expel any air or contents in it; whereas during expiration these were drawn up, and the vagina sucked up air. This he had proved by the kinometer . . . . This also occurred in cases of cellular abscess . . . . opened per vaginam. Air was soon sucked in, and the most offensive fluid produced, giving rise to irritative fever and typhoid symptoms. Exactly the same thing occurred in cases of labour where, after delivery, matters were returned and which became fœtid, producing one variety of puerperal fever." In answer to the remarks made by me Dr. Routh then further said "that the vagina only when the patient had her legs closed did not suck up air. The cases of flatus expelled by the vagina had been shown in this very variety to be due to a vermicular action of the mucous membrane, by which air was sucked in, and when

a patient sat down; as, for instance, during defæcation, air could not but penetrate up the vagina."

Taking a great interest in this question and not having read Dr. Routh's experiments with the kinometer, I put myself in communication with him, and I take this opportunity to thank him once more for the kindness with which he sent me his 'Lettsomian Lectures.' In his letter he qualifies the above remarks by saying "that he did not intend his published experiments to prove that air entered the vagina when a woman *laid down, as he never heard the fact disputed.*[1] The fact was quite familiar to him that women lying down and sitting break wind as loud as per anum, and in such cases the uterus was found quite healthy, and the air must have been taken in by the vagina. He believed that women sitting at stool likewise sometimes so take in during expiration cold air per vaginam, and he thinks he has sometimes observed this cause suffice to produce catarrh of the uterus."

Dr. Hall Davis considered a bandage a wise precaution to prevent a vacuum in the uterus after the "escape of the retained menstrual fluid (from imperforate hymen), and the rushing in of air from without to fill it."

Dr. Kristeller, of Berlin, in his article on vaginal respiration ('Monatsschr. f. Geb.,' June, 1869), describes very accurately the movements of the vaginal walls, synchronous with the pectoral respiration, as observed after the introduction of Sims' speculum. His experiments do not show what is the state of the vaginal walls under normal conditions, that is to say, when undistended by the speculum. He seems to assume these two things to be one, and believes that whenever the close contact of the labia is suspended, the effect of what he describes as vaginal respiration must take place. So in coitus, in digital examination, injections, or where the vagina is distended by a pessary; or when the descending uterus or a tumour come down in the vagina, and when at the same time the vulva has lost its firm closure by perinæal rupture, relaxation, &c. The position of the female is not mentioned.—The puerperal state, in that author's opinion,

[1] The italics are mine.—A. R.

offers favorable conditions for the aspiration of air. The air bubbles in the discharge, decomposition of pessaries and mucus are effects daily to be observed, and the obstinacy of many genital catarrhs might depend on it.

This is the substance of what I have been able to find published on our subject. If any member should be aware of other publications touching the subject, I shall feel greatly obliged if he will kindly direct my attention to them.

If we place a female, who has not borne any children and whose genitals are in the normal state, *on her back*, with the thighs flexed and abducted, we see the vaginal orifice closed. On very careful inspection we notice a very slight movement of the perineal region corresponding with the respiratory movements. This in nulliparous women is often scarcely perceptible. Violent respiratory movements slightly increase this bulging of the perineal region, but no air enters or leaves the vagina.

If a woman, the wide introitus of whose flaccid vulva offers no resistance, is placed in the same recumbent position, no air will be observed to enter or leave the vagina, however forcibly the respiration may be performed. More or less of the lower part of the vagina may be protruded (in coughing or straining), but this is always done in a manner which allows only the protruded part to be seen, and to come into contact with the air, but never shows the vagina distended by air. Even in cases of ruptured perinæum, prolapse of the vagina, and even rectocele and cystocele, the result is observed to be the same. Try whatever we may, we cannot produce any vaginal flatus. Nor does it make any difference in what state or position the uterus is. I have examined many cases of retroflexion and anteflexion, cases where pelvic cellulitis had produced adhesions, or still filled the pelvis with its exudation, and invariably found that *while the female was lying on her back no air would rush into the vagina or be expelled from it.*

I must here at once mention a source of fallacy which seems to have misled observers. You ask a woman troubled with vaginal flatus to lie down, and find that in lying down and in coughing she will audibly expel air from the vagina.

But let her cough or strain a few times, and so completely expel the air which she had in the vagina before she was on her back, and no exertion of hers will then cause the air to enter or escape as long as she keeps that position. We shall explain this further in the course of this paper.

A spasmodic action of the vagina has been assumed to cause a suction movement whereby air was drawn into the vagina. I have examined four cases of well-marked vaginismus, to adopt Dr. Sims's term, and the result fully justified the grave doubts which I had, *à priori*, as to the physical possibility of such a sucking power of the vagina. No air was drawn in or expelled while the patients were on their back, and, moreover, these very cases never suffered from vaginal flatus.

But when we mechanically open the lower part of the vagina of a female on her back, will the air rush in and distend the rest? Certainly not. The proof of this assertion is very easy. Pull the lips and the vaginal orifice asunder with your fingers, and the vagina remains in closest apposition, except where your fingers distend it; you see nothing of it. Introduce your finger as you do in examination, and you will find the walls everywhere in the closest apposition to each other and to the cervix, not leaving any space to be filled up by air. These experiments, which all of us are in the habit of daily making, are quite conclusive, and prove the point better than the introduction of a glass or india-rubber tube into the vagina. But if you do introduce a tube, you will find that no air or fluid is sucked in. As these experiments cannot be well described without entering into all the sources of error which must be avoided, I must resign myself to mention them any further on this occasion.

To make things apparently still more favorable for the air to distend the vagina, let us introduce slowly a cylindrical speculum. [The woman is supposed to be still on her back, as in all experiments hitherto mentioned.] We see nothing of the vagina except that changing part which completely closes the vaginal aperture of the instrument as we push it in or withdraw it. When we remove the instrument no air

remains in the vagina, except what little the moist walls may have absorbed, and what may remain in the shape of frothy mucus, caused by the walls in collapsing, catching as it were minute quantities of air in the tenacious vaginal discharge.

Another proof of what I have said is furnished by Sims' speculum, which will not permit the vagina of a female to be seen while she is on her back, unless we pull the posterior wall back so far that the anterior wall falling backwards cannot any more reach the speculum.

Before changing the position of the female for further experiments, I beg to be permitted to pause for a few remarks to explain what we have hitherto found.

The atmosphere acting with the same force upon the whole surface of the body, and, therefore, also equally on the abdominal walls and on the perinæal region, its force is completely neutralised, that is to say, the contents of the abdomen and pelvis are under equal pressure from all sides. The walls of the abdomen being yielding, no conditions can be produced similar to those existing in the thoracic cavity, and a suction is impossible. In inspiration the thoracic cavity is enlarged by the raising of the ribs on the one hand, and by the contraction of a powerful diaphragm on the other; a vacuum between the lungs and thoracic walls would be thereby produced, did the outward air not rush in through the trachea and distend the lungs. The diaphragm plays the part of a movable piston in the syringe, the thorax gives the equivalent of the unyielding barrel, and the trachea does for the nozzle. If we liken the abdominal cavity to a syringe, we find that the barrel would be one of a yielding material—the abdominal walls. If there were any piston action, the outward atmosphere would force in the walls, and make the sucking action of the syringe nil. Nor is the abdominal cavity with its yielding wall to be compared to the modern improvement of our old-fashioned barrel syringes—the india-rubber syringe. In the latter the walls yield to outward pressure (we will compare to it the contraction of the abdominal muscles), as do also the abdominal walls, but

there is no power corresponding to the elasticity of the india-rubber ball, by which it regains its previous ball shape, and so creates a vacuum into which the atmosphere forces the fluid. The abdominal muscles by their contraction decrease the abdominal cavity, and put its contents under increased pressure, which the latter try to escape from if they can. The pressure gone with the contraction, they are again under their previous normal pressure, and the compressed intestinal gases expand again to the corresponding volume. It is very tempting to enlarge on these interesting physiological points, but it must suffice for my present purpose to only allude to them.

The above remarks, I am sanguine to hope, show that the abdominal cavity can have no suction power. Let us now examine if the vagina can have that power which has been ascribed to it by nearly all the authors quoted above. Sucking power, as we have seen, while briefly noticing the pectoral respiration, is equivalent to the power of creating a vacuum. As the authors have failed to show how spasmodic contraction of the vagina, alternating with relaxation, can create the conditions necessary for "suction"—a misleading word, as it attributes the active part to the wrong place—I may be permitted to show that these conditions cannot exist, and thus at once to dispose of their hypothesis. The vagina is not like an india-rubber tube, which after compression, by the contraction of its muscular fibres, will expand and form a canal, into which the air will enter. The walls of the vagina are always in close apposition, no matter whether its muscular apparatus is in a state of the utmost contraction or relaxation. The vagina, moreover, is as little like the barrel of a syringe in which the uterus acts the part of the piston—this is what Dr. Hewitt's theory really means—as a flaccid bladder could replace the unyielding chamber of the syringe.

But how is it that in some cases air is expelled from the vagina?

Let us now alter the position of the female. In placing her in the *lateral* or *semiprone position* (as Sims directs us to do when using his speculum), and still more so on putting

her *on her knees and elbows,* the conditions are materially changed, and a force is created which, under favorable circumstances, will cause air to distend the vagina. The vulvar orifice from some cause must be open.

My explanation is this. The contents of the abdomen and its soft walls all obey the law of gravitation. When by their own weight, and that of the superincumbent abdominal contents, the abdominal walls fall outward, a vacuum would be created, which, according to the greater or less resistance offered by the skin, fasciæ, and muscles of the anterior wall, must be larger or smaller. As long as the closed vaginal opening keeps the air out from this canal, the intestinal gases will, by their expansion, prevent the formation of a vacuum; but if from some cause the vaginal orifice be open, the air will find the vaginal walls under a pressure on their abdominal aspect, which is less than the atmospheric pressure; so they must yield, that is to say, they will be distended, until by their distension the expanded intestinal gases are reduced to the volume that belongs to them under the pressure of the atmosphere. Or to put it in a more homely way, the vagina will be distended until it has abolished the vacuum created by the falling out of the abdominal walls.

This slight difference of pressure caused by gravitation completely explains all the phenomena.

It is with great reluctance that I deny myself the pleasure of entering more fully into further details, and of illustrating by additional experiments a subject which gains new and interesting points the more we think about it.

As long as the female, whose vagina is filled with air in the way just described, retains her prone position the air will not be expelled audibly, although its quantity slightly varies with the respiration. What has been described by Kristeller as vaginal respiration can now be seen to perfection, but exists only in an appreciable degree under these conditions. My investigations, which it would be too long to detail here, seem to warrant me in believing that these movements of the vaginal walls do not take place when the vagina is undistended by air. This is of practical importance.

If we now cause the female to perform some violent expiratory act, in which the abdominal muscles contract, air is expelled with more or less noise, according to the contact previously regained by the vaginal orifice, and if this opening gap be opened artificially, new air will rush in again, when the contraction of the abdominal muscles ceases.

By supporting the abdomen with the hands or by a bandage, the entrance of air will be prevented, or the air already within will be expelled in exactly the same way as it was done by straining or other violent expiratory movements. This little experiment shows very beautifully that gravitation is at the bottom of the whole phenomenon.

If a woman whose vagina is distended with air changes her position from the prone to the erect one, as in standing up or sitting down, which is the same as in stooping, the abdominal contents press on the vagina and expel the air. If she lies down on her back exactly the same force—gravitation—which made the air enter will expel it again. The abdominal walls and the contents of its cavity will gravitate backwards (inwards) until they find an unyielding support on the posterior wall. Now, instead of the diminished pressure in the prone position the reverse is created, a slight increase of it, which drives the air out of the vagina.

According to the above, the force which draws the air in, to use a popular term, must vary in degree with the firmness of the abdominal walls and with the mobility and weight of its contents, but I found it never more than a few inches of fluid, corresponding to a few lines of the mercury in the barometer. Fortunately, the vagina is saved from the terrible pressure of fifteen pounds to each tender square inch.

I anticipate that some members who, when they heard the title of this paper read, considered it a theoretical one, still feel justified in giving that verdict. I must, therefore, make haste and show the *practical importance of the subject.* I am sanguine enough to think that I may thereby induce some few to reconsider their verdict.

Apart from the discomfort of vaginal flatus, which, as we

have seen, is scarcely to be in itself considered of importance, many cases are on record in which death was believed to have been caused by air entering the uterine veins after labour. Decomposition of the uterine contents by the invading air is considered by others to be the cause of the most serious puerperal disease, and not long ago the greatest importance was in this Society attached to keeping out the air from the uterus in cases of retained menstrua from imperforate hymen. Air entering pelvic abscess through the vagina was by a learned member pronounced to cause the most evil consequences.

It would be easy to multiply the cases in which this air question plays an important part. Many of the published cases of death from air entering the uterine veins after labour were no doubt cases of embolism then not yet understood; in others the air was forced in by the syringe, but still an immense number of cases remain where the air might be a cause of serious mischief.

But how can we hope to form correct ideas or shape means for preventing the dreaded invasion by air of the vagina and uterus before we have studied and recognised the conditions under which air can be forced in? These once gained we see our way clear pathologically and therapeutically.

During the discussion of Dr. Copeman's paper I already gave the pith of my present paper, and finding, on that occasion, my views opposed, I intended to bring this important subject prominently before the Society. I shall consider myself fully rewarded for the labour bestowed on the subject if members will honour me with a merciless criticism.

I have deferred purposely to mention the case of labour until I could, in this practical part of my paper, give at the same time what I believe the important conclusions with regard to therapeutics.

Every careful practitioner who grasps the womb after the expulsion of the child, to remove the placenta or expel clots, will have heard a gurgling noise—air leaving the vagina.

The same is observed when the woman is placed on her back after delivery on her side.

The conditions here are highly favorable for the entrance of air, as they are, in an exaggerated degree, those above described: a largely distended vagina and vulvar orifice and abdominal walls which have lost all power of resistance by their superdistension in the latter months of pregnancy. It is beyond doubt that air here enters while the woman is lying on her side, and much more will enter when, for some reason, she is placed on her knees and elbows. But I believe that the air will enter the womb no more than it did enter this organ in the above-detailed experiments. If the large womb after labour contracts it cannot, of course, create a vacuum, and if in a state of relaxation the heavy walls collapse as much as the clots that may be retained will permit. I have examined several uteri removed from cases that had died immediately after the child had been born; one case in which the patient had died from effusion into the pleura and valvular disease of the heart in the moment when the head was clearing the perinæum; and several others who died some days after labour. I have not been able to make air distend the organ, even when I pulled the os open. From this I believe I am justified in believing that the organ *in situ* and surrounded, moreover, by the intestines which will, to a degree, compress its wall, will not be distended by what air may enter the vagina. But it seems to me to deserve the attention of all who believe in the deleterious influence of the air, to observe what must take place, if obstetrical operations are performed while the patient is lying on her side or in the prone position (for instance, for replacing the prolapsed funis). If, in this position, the forceps or hand distends the uterus air can enter, and I believe to have observed cases where it did enter the uterus. Here the hand or instruments supply a distending power which the uterus ordinarily does not possess, but which Dr. Hall Davis at least for once assumed (l. c.).

In the great majority of labour cases this air entering the vagina or even the uterus cannot be of great importance, and

cannot *per se* produce puerperal fever, or else that dire malady must be much more frequent than it fortunately is in these islands, where obstetrical operations are mostly made in the lateral position. But before we know all about the influence of atmospheric air on a puerperal uterus it will be a wise precaution to keep it out, by placing the woman on her back whenever feasible. I hold it wise, and always act up to this belief, to place the parturient female on her back immediately after delivery of the child. Not only do I, in this manner, prevent the air from entering the vagina, but the expulsion of the placenta is also more easily accomplished by outward pressure. This, no doubt practised by many, cannot sufficiently have been insisted upon in teaching, as I have been called to cases where after delivery the women were actually warned from assuming the grateful position on their back, and in which I found the uterus filled with clots and the vagina besides containing air. These, no doubt, are conditions highly favorable for decomposition to take place.

Prof. Martin, of Berlin ('Monats. f. Geb.,' 1864), has drawn attention to the rapid decomposition in the womb, which sometimes takes place in cases of lingering labour. He believes that the uterus badly contracting and distended by the child permits air to enter and cause the mischief.

By keeping in mind under what conditions air cannot enter the vagina, we are enabled by proper position and a bandage also to shut it out from the uterus. For if none enters the vagina none can invade the uterus.

I hope thus to have shown that the present investigation is far from being a purely theoretical one, and can with confidence leave it to the Society to test its results in practice.

Permit me to sum up the principal points.

1. No air enters the vagina of a female placed on her back.

2. In the prone position the abdominal walls and the contents of the abdomen fall outwards and cause a diminished pressure in that cavity. If the vaginal orifice be open, air will enter and so compress the expanded intestinal gases to their previous volume.

3. The force with which it enters and consequently the

quantity which distends the vagina varies with the resistance offered by the abdominal walls to the gravitation and the degree of mobility of the viscera.

4. In replacing the female on her back, the abdominal walls and abdominal contents fall inwards and expel the air again from the vagina.

5. Air will not enter the uterus unless distended by fœtus, hand, or instruments.

6. In the position on the back we have an efficient means of keeping the air out of the vagina and uterus, and so preventing the deleterious consequences ascribed to its action on the vaginal and uterine contents.

7. In abscesses communicating with the upper part of the vagina this position will be of equal importance.

Dr. J. Braxton Hicks congratulated Dr. Rasch upon his very valuable paper, and with the greater part he agreed. But to the first proposition in his summary he could not entirely assent, namely, that no air could enter the vagina when a woman laid down on her back. If the uterus be prolapsed, and she laid down, the uterus receded a certain distance upwards; if so, then the vulva being open air could enter. The uterus of course did not rise to its natural position, but about half way up the curve of the vagina. This was more marked if the patient's pelvis were elevated, as was the case in some kind of beds, where the shoulders were lower than the hips, It was to this occurrence that his former remarks applied. He had fully appreciated the ease with which air would enter the vagina, when the patient is placed on the elbows and knees; how that the gravitation of the bowels and the pregnant retroverted uterus allowed the entry of a large quantity of air, that then the position of the uterus frequently became restored without any pressure whatever.

After a few remarks from Dr. Murray,

Dr. Routh, after eulogising Dr. Rasch's paper, and admitting that it was an excellent physiological explanation of the phenomena, still believed it was defective in not explaining all the phenomena observed:—1. The causes specified by Dr. Rasch were inaction in all women. How was it therefore so rare a disease? 2. A reversed vermicular action of other mucous membranes of the body was often observed, as a pathological symptom, as in some kinds of vomiting, and in the constant passage of bile upwards into the stomach, instead of downwards into the intestine. It

was also a physiological daily occurrence in ruminantia, why should it not occur also in the vagina? 3. When the kinometer was used, physiologically, this action of vaginal inspiration of gas or fluid during expiration by the lungs, and of vaginal expulsion of fluid or gas during inspiration by the lungs, was observed in every woman. 4. Phantom tumours were indubitably due to spasmodic contraction of the abdominal muscles, by which, as Dr. Murray had observed, the intestines and their gases contained were, as it were, sucked up into a gaseous tumour. Suppose a partial spasm of the vagina to occur, air could be sucked up from the external opening. This partial spasm was surely present in vaginismus. Lastly, the conditions most favorable to suction of air upwards into the vagina were universally present in cooks and charwomen when scrubbing floors and steps, *i. e.* the legs open, and the stooping posture (in many cases, if the women were old, still further facilitated by a shrivelled pudendum, which did not close effectively the external opening), yet it was not among this class of women he had chiefly found this rare disease, but mostly in ladies of remarkably sedentary habits.

Dr. Gervis differed from Dr. Murray in his opinion as to the superior advantages of the lateral position in cases of flooding after labour. On the contrary, he had always found much advantage derived from putting the patient on her back, a position which he thought not only favoured uterine contraction, but enabled the practitioner to much more effectively grasp and control the uterus. Nor had he ever found any difficulty in ascertaining if hæmorrhage was proceeding when the patient was in this position. As regards Dr. Routh's suggestion, that if Dr. Rasch's theory were correct, whenever a woman stooped air must enter the vagina, he thought Dr. Routh had overlooked the condition Dr. Rasch laid down as essential, viz. that in addition to the force of gravitation acting upon the abdominal viscera in the semiprone position (to which stooping was analogous), the vaginal inlet must be open, and in stooping this condition must be necessarily fulfilled.

Dr. Heywood Smith agreed with what Dr. Routh had said as to the comparative rarity of the condition referred to by Dr. Rasch. To those who were in the habit of examining a large number of women, it is only on rare occasions that such phenomenon presents itself. He had found in certain cases that Marion Sims' position, *i. e.* the thorax prone and the hips somewhat high, was favorable to the production of the globular condition of the vagina, in which state it was difficult to make a proper examination because of the withdrawal of the uterus upwards, *i. e.* downwards in reference to the woman's then position. This had a greater tendency to happen when examination was made with two fingers, especially when they were placed across the vaginal

orifice. That ordinarily, even when the speculum had been used, on its withdrawal the vaginal walls followed it down, absolutely excluding all air, but when anything interfered with this action air was retained, the sphincter vaginæ keeping the orifice closed. The presence of this condition then is more frequent in cases where the upper part of the vagina has been rendered abnormal by any cicatrices, by any version of the uterus, especially marked retroversion, or shortening of the cervix uteri, whether by disease or amputation. He thought that in hysterical subjects, the power of retaining air in the vagina having been discovered, the patient would probably favour the condition for its maintenance.

CASE OF BILOCULAR UTERUS.

By C. H. F. Routh, M.D.,

SENIOR PHYSICIAN TO THE SAMARITAN FREE HOSPITAL FOR WOMEN, ETC.

E. Y—, æt. 35, a native of Colchester, was admitted under my care at the above hospital, November 18th, 1869. This patient began to menstruate at fifteen and a half years old. The period lasted usually eight days, although stopping occasionally between the days. A good deal of leucorrhœa had invariably persisted. There was always severe dysmenorrhœa before the period was fully established, but no sickness. Twelve months ago, and during the occurrence of a period at Felixstowe, she was seized with most violent sickness and vomiting, which continued for forty-eight hours. This was said to be due to an attack of "inflammation of the womb on the left side low down." A second attack came on at Colchester, at Christmas, which was stopped by a medical man she called in, and who also made a digital examination. He told her she must go into an hospital, as she was labouring under enlargement of the womb. This prospect so upset her that the sickness recurred and lasted six days, with pain chiefly referred to the left side instead of the right as before. This sickness was so severe she was not expected to live. From this time, however, she rallied. The pain and sickness did

not recur for two months after this attack. Subsequently, however, it always accompanied every period, lasting for three days, but ceasing once the period was fully established.

On examination the hymen was found intact and requiring dilatation before admitting the finger. Cervix prolonged, small, a very small single opening apparently in the centre of the cervix, but which required some management before the sound could be introduced through it. This sound appeared to be tightened within the cavity and passed backward and upward. It also gave rise to considerable pain, and the patient became very hysterical after its withdrawal.

This patient's case, it will be seen in the sequel, was not clearly made out at first. The cervical opening was freely opened by the hysterotome, and subsequently dilated by a sea tangle. The tissue, however, was very tense and could not be easily cut, and although several sea tangles were successively applied very little impression appeared to be made. It was noticed sometimes that the sound passed (as when first examined) upward and to the left side, as if the organ was antiverted. Sometimes, however, it seemed to pass in an exactly opposite direction, *i. e.*, backwards as if retroverted and to the right side, and the sea tangle was alternately put in into one or the other direction. It was believed this was due to undue mobility of the uterus. On the 23rd November, the cavity being apparently in an antiverted state, the external os was again incised by the hysterotome, and a sponge tent introduced. The next day the parts were greatly changed in appearance. Within the os, which was now quite patent, about half an inch up, the finger came across what appeared to be a fibroid, from its excessive hardness, dividing the cervical canal in two. This partition was rounded, especially superiorly, about the size of a marble and narrowing below. A new sponge tent was now put in on the left side. On the following day, being puzzled at the state of things, I made a very careful examination. The sound penetrated three inches in a direction upward and outward toward the left side in the supposed cervical prolongation. On attempting, however, to pass it on the

right side, after a little management the sound penetrated two and a half inches in a direction downwards and to the right side, disclosing the true nature of the case. A subsequent menstrual period occurred without pain, and she left the hospital apparently cured of the dysmenorrhœa and sickness.

Remarks.—This is the second case I have seen, and simple as these cases appear they very frequently baffle discovery. The other case occurred in the practice of a friend, whose cases I was seeing for him, and although an expert accoucheur, and though frequent examinations had been made both by speculum and sound, he had not detected it. Here also I discovered it, certainly more by accident than skill; and I believe cases of bilocular uterus are far more common than is generally believed, only that they are so difficult to make out; they are seldom diagnosed correctly, on the contrary, generally overlooked.

CASE OF VAGINA AND UTERUS DIVIDED BY A SEPTUM.

By W. R. Rogers, M.D.,
PHYSICIAN TO THE SAMARITAN HOSPITAL.

Knowing that my colleague, Dr. Routh, has sent to the Society an interesting case of bifid uterus, and hearing that other cases have been lately seen at neighbouring hospitals, I think it well to send some particulars of one which came under my care two years since at the Samaritan Hospital. They mostly present difficulties in their diagnosis, and are often very puzzling till their true nature is made out; no doubt differences will be noted in all such cases, and each will have some peculiar interest, more especially to us as obstetricians.

Elizabeth R—, æt. 22, married one year, an out-patient of the Samaritan Hospital, complained of great internal heat

and pain on passing her water. On examination it was found she had gonorrhœa, which she stated her husband had given her. She attributed his misconduct to her dislike to his embraces, in fact, she dreaded coitus, as she suffered so much pain. I was surprised to find a peculiar loose fleshy band or septum dividing the vagina into two pouches, which, at each coitus, had been forced inwards, pulling upon the sides of vagina to which it was attached, thus causing the pain she spoke of. This septum, being thus stretched, fell loosely over the cervix uteri, to which it was attached over its centre. After some time, on further careful examination, an opening into uterus was found on each side of septum. Sounds passed into each opening did not touch, but were in two cavities, a septum between them dividing the uterus into two halves. She was then admitted an in-patient, and when under chloroform the band was removed easily by scissors; the bleeding was checked by plugging with cotton-wool soaked in tannin. When well she left the hospital, being assured her married life would be henceforward much happier; this has been subsequently verified by her own admission, as she called to show herself and thank us for the great relief she experienced.

Dr. Wiltshire remarked that possibly this condition might explain some of the cases of superfœtation: conception having occurred in either uterus, but at different dates. Some of the cases of bifid uterus were instances of arrested development, the organ resembling very much that of the mare.

OCTOBER 5TH, 1870.

DR. GRAILY HEWITT, President, in the Chair.

Present—47 Fellows and 3 visitors.

Dr. G. Yates, Walthamstow, was elected Fellow of the Society.

Dr. PROTHEROE SMITH exhibited a specimen of carcinoma of the cavity of the uterus. The patient was fifty-five years of age, had been married thirty years. The catamenia commenced at the age of twelve and ceased at the age of forty-nine, having been irregular for two years previously. She miscarried three times, the last twenty-seven years since. From November, 1868, she had uterine discharge, and soon after (in January, 1869) "pain in the right groin and back." In July of that year Dr. Greenhalgh removed an intra-uterine polypus of the size of a small cherry. After this she became a patient of Dr. Barnes, to whom Dr. Protheroe Smith was indebted for seeing the case. She was admitted into the Hospital for Women, in March, 1870, when cancer of the fundus uteri having been diagnosed, she was treated for some time with strong carbolic acid in utero. The disease, as would be seen, implicated the fundus and body of the organ, leaving the cervix intact, and was characterised by extreme pain, amounting to agony at times, and by the peculiar offensive discharge so well known as that of cancer. It would, however, be seen how a difficulty in diagnosis might occur in such cases when the *touché* and speculum yield no evidence of disease, especially so since the assertion that cancer

uteri invariably commences at the cervix claims the authority of such pathologists as Rokitansky, Sir Charles Clarke, Dr. F. Ramsbotham and Dr. Walshe. This may explain why but comparatively few instances of this form of cancer have been recorded. In his own practice he could remember four or five cases all presenting the same diagnostic symptoms, and all but one terminating in a very painful death. The exception was that of a lady he attended some twenty years since. She was treated with solid potassa caustica by the instrument he now exhibited, made by Ferguson, of Smithfield, and by means of which carbolic acid was used in the present instance. This uterine port-caustic allows of the introduction in utero of either fluids or solids concealed, with power to apply them to any given part of the surface of the uterine cavity and to withdraw them, and afterwards to inject water or whatever may be required to circumscribe or to neutralise the action of the remedy. The usual symptoms of pain, fœtid discharge, increased length of the uterine cavity, and other characteristics, marked this case as one of intra-uterine cancer, of which the only circumstance calculated to throw a doubt on the diagnosis was her recovery. The intense suffering and fatal issue of such cases yielded sufficient ground for hoping that by accurately defining the peculiarities of the malady in its incipient state, such operations and treatment, even at some risk, might be found justifiable in the hope of occasionally arresting or remedying the disease. He, therefore, hoped it might be thought worthy a close investigation by the Society.

Dr. Phillips, having referred to the rarity of malignant disease confined to the body of the uterus, said that he had hoped to have exhibited to the Society the same evening a specimen of the kind, but it had been misplaced. The patient was only twenty-two years old and died while under his care, at Guy's Hospital, in August of the present year. The fundus uteri was converted into a mass of malignant disease, and there was similar disease in both ovaries, but the cervix uteri was quite free from it. Secondary deposits occurred in the lungs and bronchial glands; these were succeeded by pleuritic effusion, œdema of the upper

half of the body, and death. The diagnosis of these cases during life he considered to be attended with great difficulty. In his case there was very little vaginal discharge, either sanguineous or "leucorrhœal." The uterus was moveable, and it was only on the occurrence of the thoracic symptoms that any suspicion of the very serious nature of the disease was formed. The specimen which was being exhibited to the members reminded him more of strumous than of cancerous disease of the uterus. The apparent non-implication of the Fallopian tubes was, however, rather an argument against this view, inasmuch as the tubes seemed to be almost invariably the starting-point of strumous disease of the female genitalia. He could remember only one case in which such disease was more advanced in the mucous membrane of the uterus itself than in that of the Fallopian tube.

Dr. Routh pointed out Dr. P. Smith's case illustrated the remarkable connection he had before observed in the Society of the coetaneous affections of the two ovaries and the fundus, both of which were affected with cancer, and both were presided over by the same nerve, which might be supposed in both localities to have prevented the secretion. He thought it would be very desirable if Dr. P. Smith, in recording this case in the 'Transactions,' could enter more in detail as to the *exact* symptoms. Thus by external palpation, as well as by internal examination of the uterus by the finger sound. It was obvious if the diagnosis of cancer originating at the fundus was characterised by symptoms as specific as those of fundal endometritis, the diagnosis could be much facilitated. Then, were the glands in the neighbourhood free? Was it the case that in cancer of the fundus there was no extension to surrounding parts? If so, the question of gastrotomy might be worth entertaining to remove the entire organ excepting only the cervix, the diseased ovaries included, and thus giving a patient the best chance of a non-recurrence.

In reply, Dr. P. Smith said he had been prevented from attending the post-mortem, and had examined the specimen for the first time in that room. Dr. Squarey, who had examined it microscopically, considered that it was cancer, and his son (Dr. Heywood Smith) had arrived at the same conclusion.

CASE OF HARD FIBROUS TUMOUR OF THE OVARY REMOVED BY OVARIOTOMY; RECOVERY.

By L. J. Martin, M.D., L.R.C.S. Edin.,
PHYSICIAN TO THE LYING-IN HOSPITAL, MELBOURNE.

In April, 1869, I was requested by a former patient of mine to visit a girl to whom he was about to be married, but who was then very ill. I found her suffering from pleurisy, with effusion into the left pleural cavity. While attending her for this illness, I observed that her abdomen was very large, and I learned that she had not menstruated for several months. Suspecting pregnancy, I questioned her closely, but found there was no foundation for my suspicion; her menstruation had stopped suddenly, had not recurred, and she attributed her swollen condition to that cause, and took no notice of it, expecting it to come all right in time. When quite recovered from her illness she consulted me about the abdominal enlargement, and then on making an examination I discovered a large hard tumour of irregularly rounded shape, almost filling the lower half of the abdomen, reaching upwards a little above the umbilicus, and extending rather backward towards the right side; it was slightly moveable. The vagina was found apparently in the virgin state; the uterus small, and very high up, the tumour barely perceptible by the finger in front of the uterus.

The case was again examined after two months of steady persistence in the use of bromide of potassium, and the tumour was found to be increasing in size so much as to effect a great difference in her general shape; her general health was not so good; menstruation still absent.

She was now admitted into the Infirmary Wards of the Lying-in Hospital, so as to obtain the advantage of a consultation with my colleague, Dr. Tracy. I extract the following entry in the case-book of the Hospital:—

"L. J—, æt. 23, single, admitted 8th July, 1869. On examination a tumour was found occupying about two thirds of the abdominal cavity, quite hard, somewhat lobulated, and extending backwards into right lumbar region. Examination par vaginam found the tumour apparently closely attached to the uterus. The sound passed in to the normal distance. There was no account of the early history of the case; the patient could not remember whether the tumour first appeared on one side or the other, in fact, she was altogether unaware of its existence until it was discovered by Dr. Martin. After consultation, it was decided that the tumour was entirely solid, slightly moveable, and closely attached to, if not absolutely an offshoot from, the uterus. Under these circumstances no operative interference was deemed advisable, and the patient was discharged."

The case was, however, still kept under careful observation, and examined from time to time for about three months, at the end of which period the tumour had increased notably in size, was more smooth and rounded in shape, more freely moveable in the abdomen, and distinctly detached and separate from the uterus, which could now be moved about on the point of the finger, quite independently of the tumour. Ascitic effusion was now evidently present around the tumour, and the condition of the patient's health still further deteriorated. Coupling this state of things with the absence of menstruation, the conclusion was irresistible that the tumour was not uterine, but ovarian. After another consultation with my colleagues, Dr. Tracy and Dr. Fetherston, and my friend Mr. James, it was resolved that although the solid nature of the tumour, the extensive incisions which would be necessary, and the very great probability of deep-seated adhesions, would entail more than usual hazard, and a less than usual chance of recovery, still an operation was justifiable, and might be successful. The girl after being informed of this opinion, and with the consent of her mother and of her intended husband, decided eagerly for the operation, and was readmitted to hospital on 9th November, 1869. The abdomen then measured round umbilicus 33 inches;

zyphoid cartilage to umbilicus 7 inches; umbilicus to pubis 7½ inches.

November 16th.—The patient having been carefully prepared during the previous week by due attention to the action of the skin, bowels, &c., I proceeded to operate, most kindly and ably assisted by my colleagues, Dr. Tracy and Dr. Fetherston, and by Mr. James, Dr. Graham, Dr. Molloy, and Dr. Avent. Dr. Motherwell in this, as in nearly all the cases of ovariotomy in the colony, administered the chloroform.

The bladder having been emptied, an incision was made from one inch above the umbilicus to one inch above the pubis; by careful deepening of this incision the peritoneum was exposed and opened, when a large quantity of ascitic fluid escaped, and the usual white glistening surface of an ovarian tumour brought into view. No adhesions were apparent, but the mass of the tumour was too large to be extracted through the opening already made, and as, by cutting into it, its solid nature was proved, as well as the almost impossibility of lessening its dimensions by any attempt to break it up, the wound in the abdomen was promptly enlarged upwards to a further extent of two inches, and with gentle force the tumour was then pressed out entire; the pedicle was thin and narrow, about three inches long, springing from the left side of the uterus. A clamp was now applied, the tumour cut away, and the pedicle secured by transfixion and tying with a double ligature, and by a circular ligature of strong hempen cord. The wound in the abdomen was then closed by seven pins, with twisted suture, with intervening superficial sutures of silver wire; the pedicle was retained outside the wound, and was transfixed by the lower pin. The patient was now placed in bed, and the abdomen covered by a warm poultice, secured by a flannel bandage.

The operation lasted forty minutes; the tumour weighed eight pounds. The cast, which is now before you, represents very faithfully the size and form of the tumour; the tumour itself was handed over to my friend, Professor Halford, for

preservation in the Museum of the Melbourne University Medical School.

The patient soon showed a moderate reaction, and complained much of soreness. A suppository of opium containing one grain was administered.

8 p.m.—Much pain in abdomen; pulse 108; tongue dry; thirst; skin soft; aspect good. Opii gr. i, in pil. statim; ice to suck; pedicle covered with a charcoal bag.

11 p.m.—Quite easy; slight nausea and thirst.

17th.—Hot wind to-day; weather most oppressive and sultry.

9 a.m.—Passed a good night, says she feels well and free from pain; pulse 126; skin cool and moist; tongue clean, but dry; no vomiting; frequent desire to have the bladder emptied; twenty-four ounces of urine removed since operation.

3 p.m.—Wind changed to the south; atmosphere cool and pleasant. Patient going on favorably; pulse 118; no pain; tongue moist; no vomiting; has passed urine twice herself; says she feels quite comfortable.

18th.—9.30 a.m. Has had a quiet night, but troubled much with occasional upward belching of wind; pulse 114; tongue clean; abdomen slightly tympanitic, but not painful or tender; wound looks as if quite united, except around pedicle, which is rapidly becoming shrunken and dried up by the charcoal; removed the lower suture from the pedicle pin, as it seemed to be rather tight. Urine passed freely about every two hours.

4 p.m.—Bowels moved, a loose watery motion, with much flatus; vomited a small quantity of greenish fluid, after which felt much relieved. Has had some chicken broth and a little brandy.

19th, 9 a.m.—Rested moderately well during the night; pulse 114, soft; tongue clean; flatulence slightly troublesome, had two more liquid motions during night; passes urine freely. Removed the four upper pins; some fluid, apparently ascitic, escaped from the track of the upper pin. Ordered aromatic draught with fifteen minims of tr. opii.

In the evening pulse 102; had to get a second draught to relieve the continued irritability of the bowels, has since been quite easy and comfortable; abdomen prominent, but soft and loose.

20th.—9.30 a.m. Going on well; quite easy and free from pain; no further disturbance of the bowels; pulse 114; urine copious. Removed all the pins, some ascitic fluid escaping from their tracks; the deep surface round the pedicle suppurating freely.

21st.—Continues to improve; the irritability of the bladder was again troublesome in the night, and she complained of colicky pains in abdomen; an enema of warm water procured a small motion, and gave exit to a large quantity of flatus, after which the troublesome symptoms disappeared. Ordered full diet and wine.

22nd.—All going on well; pedicle now hardly visible at the bottom of a cavity, which is rapidly granulating.

From this time she steadily improved, although for a few days much tormented by rheumatic pains in muscles of chest, neck, and arms. She was up and going about in the ward in the third week. The ligature of the pedicle did not, however, come away until the forty-seventh day after the operation. She was discharged from hospital on the 24th January, 1870, and I left Melbourne in February, but I have heard since my arrival home that my patient is now in perfect health, that menstruation has occurred normally, and that she was preparing for her marriage.

The interest that may belong to this case will arise, not from anything peculiar or remarkable in the mode of treatment, or in the operative procedure, but from the rarity of these fibrous tumours of the ovary, and the very great difficulty of forming a reliable diagnosis. The extreme danger and unsuccessful issue which generally attend any surgical interference with fibrous growths from the outer surface of the uterus render it of the utmost importance to be able accurately to make out the distinction between such tumours and those of the ovary. The use of the sound will sometimes give valuable aid in any such inquiry, and the condition of

the menstrual function will also be a source of information, as it may be assumed and is generally true that a marked diminution or total cessation, rather than any increase, of the menstrual flow will be found coexistent with ovarian degeneration, while any outgrowth from the uterus itself may be expected to conduce to excessive periodical discharges.

That these solid ovarian tumours are of rare occurrence I have no doubt. I find it stated in 'Clay's Translation of Kiwisch,' that "fibrous tumours of the ovary are rather rare, though he has met with them in two cases, one the size of a child's head, the other that of an adult head." In an appendix by Dr. Phillips to Dr. Bryant's work on 'Ovariotomy,' published in 1867, there is an analysis of all the cases of ovarian tumours met with at Guy's Hospital (excluding those operated on) during the previous forty years, not one of which appeared to be of the solid character; and in the long series of cases operated on and reported by the various ovariotomists who have so nobly distinguished themselves in this direction, I do not remember a single case of the removal of a solid ovarian tumour.

The record of this case of mine will show that there need be no greater difficulty with solid than with cystic forms of ovarian degeneration, an accurate diagnosis being once fairly arrived at.

Mr. Spencer Wells said it was impossible to form an opinion as to the nature of the tumour from the wax model exhibited, but looking to the extreme rarity of true fibroid tumours of the ovary, and the extreme frequency of fibroid outgrowths from the uterus, and the fact that many supposed fibroid tumours of the ovary had turned out, on accurate examinuation, to be really uterine, he believed the tumour removed by Dr. Martin to be uterine and not ovarian, and he explained the presence of the right ovary and the absence of the left, by probable adhesion of the left to the surface of the uterine tumour.

The President agreed with Mr. Wells in considering it probable that so-called fibroid tumours of the ovary had really a uterine origin.

Dr. Martin, in exhibiting a cast in wax of the tumour, explained that this model had, during passage through the tropics,

been influenced a little by the heat, and now presented a flatter form than originally belonged to it; the peculiar offshoot from its side had also been flattened in against the surface. In reply to questions from Drs. Barnes, Spencer Wells, and others, Dr. Martin could not admit the probability, which they suggested, that this tumour had no ovarian origin, but was developed from the ligament of the ovary or some part of the broad ligament. He (Dr. Martin) did not think it possible that the ovary might have been found in situ if carefully searched for after the removal of the tumour. The usual examination as to the condition of the opposite ovary had been carefully made; no sign, however, remained of anything resembling an ovary on the side from whence the tumour had been removed. He felt satisfied that the tumour was the result of fibroid degeneration of the ovary. The remarkable projection on the side of the tumour might be supposed to represent the ovary, as was suggested by Dr. Spencer Wells, but it was very doubtful. An examination of the tumour had been made by the distinguished Professor of Anatomy and Physiology in the Melbourne University (Dr. Halford), and no trace of ovarian structure had been found; it might, however, be considered that little of the original structure would remain, even if the tumour originated in the ovary. He (Dr. Martin) would not then enter into the interesting pathological questions which the discussion had evoked. He had reported the case from a purely surgical point of view, and his paper was simply a record of the fact that this rare form of tumour may, if once accurately diagnosed, be treated by ovariotomy with as much success as attends the removal of the more ordinary cystic forms of ovarian disease.

A CASE OF OVARIOTOMY.

By Edward M. Hodder, M.D., F.R.C.S. Eng.,
LECTURER ON OBSTETRIC MEDICINE, TORONTO.

November 10, 1869.—Mrs. S—, Avanosa, Canada, æt. 55; married sixteen years; no children; three abortions, the last ten years ago. First noticed enlargement of the abdomen three months ago, but thinks something was wrong two years ago. Menstruation irregular for eighteen months, but now ceased for five or six. Os slightly to the right side. Bowels quite regular; breasts diminished; nausea none.

February 10th, 1870.—The operation was performed in

the usual manner and under chloroform; incision about five inches long; peritoneum contained a pint or more of straw-coloured ascitic fluid, which escaped on opening its cavity. The tumour was nowhere adherent except by its pedicle; two cysts were tapped by the trocar, and about one and a half gallons of dark viscid fluid flowed away. The whole weighed about thirty pounds. The rest of the tumour was the ovary, enormously developed, retaining its natural shape, fully nine inches long by six broad, filled with innumerable small cysts, varying in size from a small pea to a marble, some filled with transparent albuminous-looking fluid, while others contained yellowish matter more like pus. The pedicle was somewhat short, and secured by Mr. Wells' clamp at the lower angle of the wound, the edges brought together by five long needles which transfixed the divided edges of the peritoneum, and several points of interrupted suture. A strip of lint soaked in a solution of carbolic acid placed over the wound, strips of adhesive plaster, and a bandage completed the whole.

The operation was well borne, and the patient comfortably placed in bed. Two grains of opium were given with directions to repeat one grain every two or three hours if the pain continued severe. At 10 p.m. she was comfortable and had slept; pulse 88, soft, skin cool, no tenderness; catheter drew off a pint of water.

11th, 8 a.m.—Passed a good night, slept much, no pain or tenderness, pulse 88, no sickness or great thirst. To have light nourishment.

13th.—Slept well the whole night, no pain or discomfort, pulse 80, soft and full.

14th, noon.—The clamp was removed and all the needles except the lowest one. The wound was firmly united throughout. She feels comfortable in every way; pulse 78. Tongue moist and clean.

15th.—Continues well, not a bad symptom.

16th.—On entering the room this morning I was struck by her altered appearance; pain, anxiety, and prostration were but too apparent, and upon inquiring I found that a little before daylight a sudden shift of wind caused the

chimney to smoke very badly, which soon induced violent cough (she had an attack of bronchitis about a month before the operation), and during a severe paroxysm she experienced sharp pain in the wound and felt something give way. Shortly after this she had an urgent desire to relieve the bowels (which up to this time had not been moved), and raised herself for this purpose, and during the straining efforts, the pedicle which had previously been loosened by the cough, suddenly slipped into the abdomen, and a small quantity of ascitic fluid escaped. Symptoms of prostration soon came on, the cough continued troublesome, and during a severe fit, hernia of the intestine took place through the opening left by the pedicle. She continued in this condition from about 6 a.m. until noon, when I saw her. Her countenance was sunken and anxious, pulse 110, small and weak, inclined to be sick, although vomiting had not taken place, skin clammy, distress rather than pain in the lower part of the abdomen, and thin fluid had moistened all the dressings and her clothes. On examining the wound I found a knuckle of intestine protruding of a greyish colour, having protruded through the small opening left at the lower angle of the wound by the escape of the pedicle into the abdominal cavity.

I had some difficulty in returning the intestine, and still more in keeping it in the cavity, as every cough or effort at straining caused it to protrude again. As I could not prevent its escape by a compress, I passed my finger into the abdominal cavity, then passed a long darning needle through all the tissues on both sides, and drew the edges together by the figure-of-eight suture. This had the desired effect, and hernia no longer occurred. One spot in the upper third of the wound appeared weak, and as violent straining might cause it also to give way, I passed a second needle through the integuments only, in the hope of avoiding farther accident. The wound was lightly dressed, a bandage applied, and one grain of opium every two hours until sleep was induced or all pain and uneasiness subdued. Beef tea or broth, brandy and eggs, &c., was given according to the

symptoms. At 10 p.m. prostration greater, pulse 150, small and steady, distension from flatus, but no tenderness, constant sighing, mind calm and clear, and ascitic fluid constantly oozing from the abdomen.

17th, noon.—Has passed a quiet easy night; no pain or distress, although abdominal distension is greater; discharge from wound very offensive; hiccup; pulse 140, and somewhat firmer, tongue dryish.

18th.—She continued gradually to sink, and died at 1 p.m., eight days after the operation. No post-mortem was allowed.

Nothing could have gone on more favorably than did this case up to the morning of the sixth day. Not a symptom occurred to cause the least anxiety, the pulse never exceeded 90, neither was there pain or tenderness.

The clamp was removed on the fourth day, the wound was united throughout, and the patient continued well for about forty hours afterwards, when violent cough broke down the tender adhesions of the pedicle to the lower angle of the wound, and the straining efforts at stool completed the unusual accident.

In all my previous cases of ovariotomy I have used the double ligature of whipcord, and transfixed the pedicle by the long needle in the lower portion of the wound, but seeing the report of Mr. Spencer Wells' success with the clamp, I sent to England for one and used it for the first time.

Not having seen any mention made of the accident above mentioned, and as ovariotomy is now acknowledged to be the most successful of all the major operations of surgery, I have sent the above case in the hope that it might lead to still greater precaution in the treatment of the pedicle, and which after all appears to be the bone of contention amongst operators.

Mr. Spencer Wells did not think this case bore at all against the use of the clamp; but it did impress the important lesson not to remove the clamp too early. In this case it was removed on the fourth day, when the adhesions between the peritoneal coat and the abdominal wall were too recent to be

firm. After eight or ten days, when a clamp generally falls off, or is held by mere shreds of tissue, the adhesions become sufficiently firm to prevent danger of the pedicle slipping inwards.

CASE OF OVARIAN DISEASE.

By Dr. V. Saboia, Rio Janeiro.

Senhora E—, æt. 34, married, with one child æt. 17, commenced some fourteen years since to experience some pains in the right sacro-lumbar region without presenting for some time any other symptoms of disease. Menstruation was regular and normal. For the last two years the pains became more severe, and an ovarian tumour appeared on the right side.

On my seeing the lady in February, 1865, I found the abdominal cavity occupied up to the epigastric region by a tumour superficially smooth, and in which a manifest fluctuation was present. After a consultation with the practitioners who had seen the patient, it was agreed that a puncture of the cyst and the injection of iodine should be made.

On the 24th of March, the patient not taking chloroform, I punctured the centre of the tumour and removed about two wash-hand basins of fluid. After the total expulsion of this liquid, I injected an iodine solution.

By the 15th July, however, the cyst had again filled, and I saw it was necessary to make another operation.

The 4th of August of the same year having been appointed for the operation, I was convinced, on account of the invincible despondency of the patient, that it was not possible to do anything without the use of chloroform. On the appointed day, as soon as she was chloroformed, I again emptied the cyst of two wash-hand basins full of a liquid of a sero-purulent aspect, and subsequently again injected an iodine solution. Having left to see other patients, at 1 p.m. I was hastily summoned to her bedside, and recognised that she was in the

last moment of her life. The face and the trunk were purplish and cold; there was scarcely any pulse; the eyes were immoveable and glazed; the respiration was stertorous, accompanied from time to time by a sighing moan; the pulsations of the heart were tumultuous. As the abdomen preserved its softness and compressibility, and was without the least tympanitis, I recognised a syncope following asphyxia, and learnt that after I had gone out the patient had not returned to herself from the anæsthetic sleep, and that she had up to that hour vomited three times. In spite of every exertion she died, and I apprehend there can be no doubt but that her death was due to the chloroform, and not to the operation. As such I place it on record.

The President congratulated the Society on the fact that on one evening the Society had had valuable contributions on the subject of ovarian disease from no less than three Fellows of the Society residing abroad, and that these contributions had been the means of eliciting discussion of important questions.

ON TUMOURS OF THE PELVIS OBSTRUCTING DELIVERY.

By Edward Copeman, M.D.,
PHYSICIAN TO THE NORFOLK AND NORWICH HOSPITAL.

Amongst the many embarrassing circumstances which render parturition difficult and dangerous, the existence of tumours in the pelvis, obstructing delivery, is one of the most serious. It is a condition of things which endangers the life both of the mother and the child, and the management of such cases is a source of the greatest anxiety, doubt, and trouble to the accoucheur. My own experience would have led me to think these tumours of rare occurrence, but I find

a good many cases recorded, proving they are not very uncommon. Mr. Park, in the second volume of the 'Medico-Chirurgical Transactions,' has related six cases, five discovered during parturition, and one in the unimpregnated state. Dr. Merriman, in the tenth volume of the 'Transactions,' relates five, and refers altogether to eighteen published by various authors. Of these 18, comprehending 38 lives—

Of the women,	6 recovered perfectly;
,,	3 recovered imperfectly;
,,	9 died.
Of the children,	2 were born alive;
,,	1 ditto, but incapable of living;
,,	15 were dead;
,,	2 uncertain.

So that the lives actually preserved amounted to 12,
,, not preserved ,, 26.

Much diversity of opinion appears to exist both with regard to the nature of these tumours and the proper mode of treating them; some are supposed to be ovarian, some cartilaginous, cystic, or osseous; and Mr. G. Heming, in the 'Edinburgh Journal,' vol. xxxv, refers their origin to the enlargement of a mucous follicle. He says, "This fact appears to be distinctly established by cases which have fallen under my observation; and it is the more important because it immediately suggests the propriety and safety of treatment by free incision." In confirmation of his opinion he further remarks, "I have carefully examined the bodies of two women, in whom I found tumours of this description projecting into the vagina; in one there were two of these tumours, in the other there was a single one as large as an egg. On a minute examination of their internal structure, it was evident that they consisted of obstructed lacunæ, which had thereby become dilated into a cyst and distended by a gelatinous fluid. I was enabled to trace distinctly in the smallest tumour a continuation of the mucous membrane of the vagina into the tumour, and a reflection of this

membrane forming the lining to the latter; and it is probable that the greater number of those tumours which obstruct parturition are of similar origin. The great point is the diagnosis; the conduct of the practitioner may then be both prompt and confident. A free incision at the period of parturition, and excision at any other time, will safely relieve or cure the patient," p. 82.

A review of the cases related by Dr. Merriman leads him to remark, "that experience does not warrant the practice of turning and delivering by the feet, and that upon the whole the evidence we at present possess is most in favour of opening the tumours; for of the nine women who recovered more or less perfectly, five appear to owe their safety to this operation; and of the three children born alive, or supposed to be so, two were preserved by the same means." In the two cases I am about to bring before your notice occurring in my own practice, turning was the mode of delivery resorted to, with the result of both mothers outliving the birth of the child, and one of them perfectly recovering, except that the tumour remains.

The first was the case of a miller's wife, æt. 37, living in the country, and taken in labour at full term on the 28th of December, 1867. This was her fifth confinement; the first three were easy and natural, the fourth more difficult, requiring the use of the vectis. Her present labour commenced by the waters breaking on Thursday morning, the 26th, and although the pains were good and frequent, the head would not descend into the pelvis; she complained very much of severe pain just above the pubes, and the head could be distinctly felt in that situation through the abdominal parietes. The cause of difficulty was the presence of a tumour occupying the hollow of the sacrum and a considerable portion of the pelvis, forcing the child's head forwards and preventing its descent. I was summoned in consultation on the 28th (Saturday), in consequence of the labour pains ceasing, and there being no advance towards delivery. I found the tumour large and firm, though not so hard as to resist a certain amount of indentation under

strong pressure; it did not appear to be of a bony nature, but felt more like a hard fibroid, and occupied so much of the posterior portion of the pelvis as to make it very doubtful whether the child could be born entire. We at length determined to endeavour to turn the child, which we accomplished with very great difficulty and with an amount of tractile power which we feared might imperil the life of the mother, who, however, bore the operation with the greatest patience and fortitude. The child was, of course, stillborn; the placenta came away immediately and the uterus contracted well. The patient had inhaled chloroform at intervals for some time before I saw her, and more was given after my arrival, so that altogether she had a good deal. Before I left the house she was several times sick and had a rapid pulse; but when I visited her again, the next morning, she spoke cheerfully about herself, and wondered she could feel so well, after so severe a trial. There had been neither hæmorrhage nor pain, and but little tenderness; but her pulse was rapid and rather uncertain, and she continued occasionally to vomit, and becoming exhausted she died the next day. I very much suspect that the chloroform was the cause of the persistent vomiting and fatal issue, for there was no very evident reason to account for it otherwise. Possibly, it might have been the result of shock, as there was no apparent local mischief to the uterus; but at the same time her nervous system was not much depressed after her labour, and she complained of scarcely anything the following day but the distress occasioned by the sickness. I regret to say that no post-mortem examination was allowed.

The second case occurred on the 8th of November, 1868. The patient was a fine healthy woman, æt. 35, had been married three years, and had a child about ten months after marriage. The labour took place at full term, was very severe, requiring instrumental delivery, and the child died almost immediately after birth. After that she had two abortions, and then another pregnancy, which went on to the full period. When this labour took place it soon became evident that some serious obstruction to delivery existed,

and Mr. W—, jun., summoned his father and brother to his assistance. They recognised the presence of a large tumour in the pelvis and decided to summon me to their aid. Her pains were strong, severe, and frequent, but the child's head could not descend. The tumour was hard, resisting and immovable, being attached by a broad base to the left side of the pelvis almost from the symphysis pubis to the spine of the ischium; it seemed to grow from the whole inner surface of the ramus of the pubes and ischium, and projected in a globular form almost to the hollow of the sacrum. It was too firm to admit of any indentation by pressure, and so large as almost to fill up the cavity of the pelvis, leaving a space behind towards the sacrum and to the right that would only admit of the open hand being passed beyond it with difficulty. It seemed impossible to bring the child or even any large portion of the child into the world; the head was felt just above the tumour, the child was vigorous, the pains very active, and the patient in perfect health irrespective of the tumour. What was to be done? To leave her long without assistance would have been certain destruction both to mother and child, and it seemed more than probable that whatever we might do to attempt to save either one or the other would lead to the same result. We thought of dealing in some way with the tumour itself, but it was so firm, bony so to speak, and attached by so large a base, that we were at a loss to know what could be done with it; we then considered whether it would not be best to resort to the Cæsarian section, and came to the conclusion that we should try it as a last resource; but as the patient was very courageous and had with great resignation placed her life in our hands, I advised that we should first make an attempt to turn the child and get it away, if need be, by piecemeal. By dint of perseverance I passed my flat open hand past the tumour, but my wrist would not follow; but Mr. —, whose hand was smaller, managed after a while to introduce his past the tumour, and brought down a foot; this was well secured, and by introducing his hand again he fortunately seized the other foot, which we secured also, and after a long time and hard

pulling we managed to squeeze the child's body through the narrow space. Then came the great difficulty of getting down the arms, for the hand would not pass the body of the child; the fingers, however, could be made just to reach far enough to guide a blunt hook over the child's arm, and by means of that we pulled it down, one end of the hook, however, piercing the thorax; the other arm was afterwards obtained by the same means, and the head only remained.

The extraction of the head was a matter of extreme difficulty; from its position above the tumour and the difficulty of access to it, owing to the neck so filling up the small space not occupied by the tumour, it seemed almost impossible to use the perforator without inflicting injury to the mother that might place her life in peril; and had we by forcible traction chanced to separate the body from the head, and leave the latter in the uterus, I do not believe it could have been extracted. After allowing our patient and ourselves a little rest, we determined to perforate, if possible; and by pulling the body down so as to bring the head as low as we could, the perforator was carefully introduced through the occipital bone and the cranium emptied. We then introduced an instrument which had before been so valuable to us, the blunt hook, into the opening into the cranium, and fortunately got the end of it into the spinal canal, through the foramen magnum, and thus got a very safe and efficient purchase; so that by this, aided by traction on the body of the child, we had at length, after several hours of hard work and extreme anxiety, the felicity of ridding the poor creature of her burthen, and extricating her from immediate danger. The uterus contracted well, and the placenta soon came away without hæmorrhage. The patient was not so much exhausted as might reasonably have been expected, and, as far as we could judge, did not seem to have been seriously injured by the prolonged and dangerous operation. I cannot conclude the history of this labour without expressing in strong terms of approbation my sense of the great patience, firmness, skill, and adroitness exhibited by Mr. J. W— in his management of this extremely difficult case.

His conduct throughout must have been a source of much pride and satisfaction to his father, who was present and assisted during the whole time.

A short time afterwards (December 11th), I received the following account from Mr. J. W— :—"The woman with the tumour has got fairly over her confinement, although she was very ill, and I thought at one time would have succumbed. She had rigors, and I believe some matter formed, which, however, has now all passed away. She has been too poorly for me to examine the tumour since her confinement."

In July, 1869, I had an opportunity of examining this tumour again with Mr. W—. The patient is a lodging-house keeper, and I found her in perfect health, and able to perform the duties of her occupation in life. Her complexion was healthy, and not like that of a person labouring under malignant disease of any kind, nor did the tumour produce any material inconvenience to her, although it had grown somewhat larger, and could be seen easily by separating the labia with the fingers. It still felt very hard, and occupied almost the whole of the cavity of the pelvis, with a base reaching almost from the pubes to the sacrum on the internal surface of the left side of the pelvis. She strictly avoids the chance of becoming pregnant, and is willing to submit to anything for the removal of the tumour. Can the tumour be removed by any kind of operation? This is a question the solution of which will be attempted at some future convenient opportunity.

In both these instances version was the mode of treatment adopted, and in both the child was removed through a remarkably small space, especially in the latter, where there was less room and the tumour quite unyielding. In both the operation was accomplished without serious local injury to the mother, and in one the mother recovered.

Would the history of these two cases lead us to similar management on future occasions, or would any other treatment have been more successful? Dr. Merriman was of opinion that experience does not warrant the practice of turning, and was most in favour of opening the tumour;

but I believe this would have been quite ineffectual in my second case, owing to the apparently osseous nature of the tumour. In the first I am not so sure that the tumour was not of a character to admit of being reduced in size by opening it, and in any future case where it could be ascertained that the contents of a pelvic tumour were semifluid, or soft enough to be even partially evacuated, I should advise its being opened, to give a chance of being able afterwards to extract a living child. But where there is much doubt about this, and the tumour is so hard as to give but little hope that its bulk could be lessened by an opening, I should prefer not to injure the soft structures of the mother by a previous operation, but resort, as in these instances, to turning the child and delivering by the feet.

The late Mr. Crosse, of Norwich, whose consultation midwifery practice was published by me in 1851, relates a case of tumour in the pelvis where the patient, aged 44, already the mother of a large family, had been twelve hours in labour before his arrival. He says, "On examining I felt a large mass very low in the vagina, filling the pelvis; could not feel os uteri, but on pressing upon this mass could feel what seemed like the limbs of a child felt through the soft parts half an inch in thickness. On examining the presenting mass strictly, and carrying the finger up to the highest part of the very prominent sacrum, I could feel no os uteri, but on passing my hand above the brim of the pelvis, past the presenting tumour, I felt the os uteri fully dilated, and thin membranes presenting, through which I could feel the head and hands of a full-grown fœtus. Now, I so far understood the case as to know that a tumour, connected probably with ovarium, filled the pelvis, having its attachment by a broad basis to the anterior wall or pubic direction of the passage, allowing the hand to pass behind it, close upon the projecting sacrum and lowest lumbar vertebra." Mr. Crosse in this case proceeded to turn, and, bringing down both feet, delivered the patient of a living child. The uterus, when contracting during after-pains, was felt after delivery as high nearly as the navel, as if there had been

another child, but it was kept so high only by the presence of the tumour. The mother recovered, but it is not stated what became of the tumour.

Dr. John Burns relates a case of removal of a large pelvic tumour which adhered from the symphysis pubis round to the sacrum, being attached to the urethra, obturator muscle, and rectum, intimately adhering to the brim of the pelvis, and even overlapping it a little towards the left acetabulum; it was hard, somewhat irregular, and scarcely movable. Labour came on at the full period, and there was no choice except between the Cæsarian operation and the extirpation of the tumour. The latter was decided upon, and accomplished with great difficulty. In four hours afterwards she was delivered of a stillborn child above the average size; and although considerable inflammation and constitutional irritation supervened, she recovered, and after a lapse of more than fifteen years she continued well, but never again became pregnant.

I believe Dr. Blundell considered that in cases of tumour attached to the sacro-ischiatic ligaments turning was fatal and therefore inadmissible, but the cases I have brought before you prove that the operation of turning ought not by any means to be dismissed from our consideration in reference to cases of this very trying and harassing description.

The President believed all would applaud the courage and perseverance which brought about so successful a result in the second case described. He thought Dr. Copeman had, probably unintentionally, omitted mention of a method of treatment of such cases sometimes applicable, viz. the pushing up of the obstructing tumour out of the pelvis and thus allowing of the descent of the head.

Dr. Playfair said that Dr. Copeman had not alluded to what was the chief cause of danger in labour complicated by tumour. In 1867 he (Dr. Playfair) had read a paper before the Society, "On the Treatment of Labour complicated by Ovarian Tumour," in which he had collected the details of all the cases of this complication he could meet with, amounting to fifty-seven in all. Of these, thirteen had been left to nature, that is, the tumour had been sufficiently small to admit of the child being squeezed past it. Of these thirteen cases, close upon one half had proved fatal

to the mother. In favorable contrast were the nine cases in which the tumour had been punctured, and in which, therefore, the tumour had collapsed and not been subjected to pressure, since every one of them had terminated favorably. The explanation of the great mortality in the former case was, no doubt, the contusion and pressure to which the tumour was subjected, which set up a low form of diffused peritonitis. The lesson from these facts seems undoubtedly to be that far the best way of treating these cases is to puncture the tumours when they have fluid contents, and this even if there seems room for the child to pass, while in cases in which the tumour seems solid an exploratory puncture should be made before anything more formidable is done, as apparently solid tumours have often been found to contain fluid.

Dr. Protheroe Smith observed that the opinion expressed by Dr. Playfair was of great practical value; that it was so frequently found that tumours obstructing parturition were cystic or sub-fascial deposits of serum, blood, and pus, that it not only became important under such circumstances to avoid the result of great pressure, but as such tumours could now be tested by means of his exhausting needle-trocars without risk of injury he advocated their use in all such cases instead of puncture by ordinary trocars. He would illustrate what he meant by referring to a case on which he had operated in the Hospital for Women only a few days since. The patient was in the sixth month of utero-gestation, and had a puriform tumour the size of an orange occupying and proceeding from the back wall of the vagina. From this cyst was evacuated almost an ounce of thick pus; subsequently the cyst collapsed and disappeared. Other cases, did time permit, he might quote in proof of the great advantage in such cases which the needle trocars afforded in comparison with the ordinary trocars, as, besides the readiness with which the matter was entirely withdrawn, the operation left only the prick of a pin, requiring no after treatment. In further advocacy of the needle-trocars he begged to mention a case he had attended but a few days since, aided by Mr. John Scott, in which a hard, semi-elastic tumour was discovered post-uterine, and of which the patient could give no history. The needle-trocars evacuated almost an ounce of very thick "laudable" pus, and left no pain nor distress in consequence.

Dr. Barnes observed that the discussion and the histories of known cases proved that there was no uniform method of treatment. Each case must be dealt with according to its individual features. We had to consider the size, position, structure, attachments, firmness of the tumour, and its relations to the child. If the tumour is movable, and can be pushed up out of the way, by all means do it, but in many cases this is impossible.

We must then ascertain if it contain fluid, and if so lessen its bulk; possibly the tumour may admit of being removed altogether. In a case published in the 'Transactions,' seen by him, although the tumour was large, the child was born safely; in a subsequent labour, when the tumour was, no doubt, larger, the woman died. To obviate the great danger to which Dr. Playfair had referred, that of crushing the tumour by the passage of the child, it was necessary, where you could not reduce the tumour, to reduce the bulk of the child, and in extreme cases, where the tumour grew from the walls of the pelvis, was insusceptible of diminution, and left too little room for operating upon the child, you might, as a last resource, be driven to the Cæsarian section. He had recently seen a case in which a woman died of septicæmic fever, the result of the bruising of a fibroid tumour during labour.

Dr. Madge said he had attended a case in which a large fibrous tumour prevented the descent of the child's head. The tumour was punctured and after great difficulty pushed above the brim of the pelvis. The patient died in a few days from peritonitis, the seat of puncture showing signs of having been the starting-point of the mischief. He mentioned the case to show that puncturing the tumour must be regarded as one of the elements of danger attending the management of these cases, and, therefore, an argument against a too free employment of the operation in practice.

A CASE OF HÆMORRHAGE FROM RETAINED PLACENTA AFTER ABORTION, TERMINATING FATALLY.

By George Lowe, Esq., Burton-on-Trent.

One of the pathological changes described by writers on obstetrics as sometimes occurring in cases of retention of the secundines after abortion, at an early period of gestation, is the development and growth of the placenta. Maintaining its connection with the uterus, and profusely supplied with the blood intended for the nourishment of the fœtus, it is said rapidly to increase in size, to lose its spongy vascular

character, and to acquire that of a solid fleshy mass—one kind of mole, which might not be inappropriately called placental mole. Retention of the placenta after abortion, as is well known, is not uncommon, and cases in which the placenta has been expelled or removed by manual interference, more or less in a state of putrefaction, after being retained within uterus for weeks and even months, are known by experience to most practitioners. The valuable paper of Mr. Wainwright, published many years ago in a Liverpool medical periodical, and another more recent, and not less important and complete, by Dr. Priestley, published in the 'Obstetrical Transactions,' supply numerous instances of such cases. But cases of abortion in which the placenta has not been simply retained, but has preserved its vascular connection with the uterus and increased in size, and which have given rise to urgent symptoms, and required active remedial treatment or removal by manual operation, are not common.

Dr. Priestley remarks that the placenta "may maintain its vascular connection with the uterus," but relates no case. Several practitioners of large experience, friends of the writer's, have never met with a case. No reported case of this description has been found after a search of no little diligence, and it is because of this apparently comparative rarity that the case has been thought worthy the attention of the meeting.

August 13th, 1863.—Mrs. S—, æt. 33, of fair and delicate complexion, tall and well proportioned, of strumous family, the mother of five children, and having had two miscarriages previously to the birth of her youngest child, now less than two years old, having come to Burton Market, was seized in the street with a uterine hæmorrhage so profuse that she became immediately faint, and was carried to a friend's house, where she was shortly afterwards found lying on a bed, faint and pulseless. The hæmorrhage had entirely ceased, and there was and had been no pain. She continued faint till night. Several large coagula were

examined, but no fœtus was found. Two days afterwards, as there had been no further hæmorrhage, she returned to her home, a few miles distant from Burton. She was advised to keep her bed. She continued to improve till the 28th, though whenever she got up there was some discharge of blood; on that day after some slight exertion there was a sharp return of hæmorrhage. On an examination per vaginam a substance was felt protruding through the os uteri. Its surface was obscured by coagula, but the finger could be passed all round the projecting mass.

It was ascertained that Mrs. S— had suckled her youngest child till he was fifteen months old, when she weaned him. That after weaning him she menstruated, and that for seven weeks she had no return of the menses, but that at the end of that time she flooded very much, and believed that she had miscarried. That from this time, for another period of seven weeks, she had had a constant drain of blood, and then, on going to Burton, was seized with the dangerous attack of hæmorrhage already described, up to the time of which she had no medical advice.

On the 30th, as there were no coagula, and the os uteri was more patent and dilatable, so that two fingers could be passed into the uterus, a more complete examination of the body within it was made. The substance was equal in length and breadth to the under surface of the index and middle fingers, a lobe or portion of it protruding through the os, from which it extended upwards into the uterus. Its surface was flattened and felt like placenta, though firmer. As no doubt was now entertained that the substance was a placenta, which should have been expelled when abortion was believed to have occurred, it was gently and carefully removed.

The operation was effected without chloroform and without passing the hand into the vagina, by introducing two fingers into the uterus. The removal of it caused little or no hæmorrhage, and no expression of pain.

There was no further hæmorrhage. During the night after the operation the patient had a shivering fit, which was

followed by sickness and diarrhœa, pain in the head, back, and limbs, and great heat of skin. The pulse, previously quick, became excessively rapid. There was no abdominal or uterine pain or tenderness. In spite of remedies these symptoms proved most obstinate.

On September 5th she was suddenly seized with an acute pain and soreness in the abdomen to the right of the umbilicus, which a blister removed; but frequent attacks of sickness continued, the mouth, throat, and tongue became aphthous and the cause of much distress; there was great thirst and, without frequent doses of opium, diarrhœa. She gradually sank, and died September 26th. No post-mortem was allowed.

The substance removed from the uterus displayed the reticulated structure of placenta so distinctly that, though much more solid in texture than placenta, no doubt was entertained as to its nature.

Mr. Paget most kindly informed me that under the microscope "the structures were just such as would be seen in a piece of placenta altered by retention in the uterus after abortion and becoming organized."

There was no delirium during any part of the illness, no swelling of either leg, no pain or hardness in the course of the iliac or femoral veins, and no vaginal or uterine discharge. The suppression of the menses, this suppression being succeeded seven weeks afterwards by flooding, the continued sanguineous drain during another period of seven weeks, preceding the profuse hæmorrhage at Burton, as well as that hæmorrhage itself, are collectively symptoms almost positively diagnostic of abortion with retention of the secundines. Whenever, indeed, an abortion is followed by hæmorrhage continued from day to day, it may be confidently assumed that some portion of the secundines has been retained.

Leroux alludes to this hæmorrhage as an infallible sign of retention of the placenta or a portion of it, retention of the secundines causing, like polypus and fibrous tumour, irritation and congestion of the mucous membrane and hæmorrhage.

In the case of Mrs. S—, not only was there retention and

adhesion of the placenta, but it was attached closely to the os uteri, so that as it grew it projected into and partly through the os. If the poor woman had lived, and had not miscarried, she would have suffered from a partial placenta prævia.

It was probably less to the presence of the placenta within the uterus than to its irritating contact with the os uteri that the early and grave symptoms are to be ascribed.

The propriety of removing, by manual operation, a retained placenta, which has maintained its vascular connection with the uterus and become an incipient mole, may be questioned. In cases where the os uteri is closed and the symptoms are not urgent, an expectant practice may be thought by many the more judicious; but even in such a case it is believed that the safest practice will be to dilate the os uteri, and carefully, but completely, clear the uterus of its contents.

In the case of Mrs. S— there was no alternative but to remove the placenta. To allow it to remain would have been to allow the patient to die of hæmorrhage. And although the case terminated fatally, the fact that all hæmorrhage ceased on the removal of the placenta is so far evidence in favour of the practice.

It is stated by some writers that dangerous symptoms are more apt to follow abortions occurring in the first two months than at a more advanced period, as then the expulsive power of the uterus is too feeble to compress or expel the ovum, and that consequently the secundines are more likely to be retained, a view the present case tends to confirm. What, it may be asked, caused the symptoms which so immediately followed the removal of the placenta? The absence of uterine pain, tenderness, or discharge, there being neither swelling of the legs, nor hardness, nor tenderness in the course of the iliac or femoral veins, led to the conclusion that they did not proceed from metritis or uterine phlebitis. They arose, most probably, either from an acute attack of muco-gastritis and enteritis, or from pyæmia, occurring in a constitution not originally strong, and greatly enfeebled by loss of blood.

The PRESIDENT thought little doubt was now entertained as to the expediency of removing as rapidly as possible the secundines in cases of abortion, with the view of preventing various disasters. As a matter of fact he had found retention of the secundines usually associated in such cases with a marked flexion of the uterus, which condition both caused the abortion and interfered with its completion.

Dr. PLAYFAIR said that there was one statement in Mr. Lowe's paper which was probably the reverse of the fact, viz. that abortion was more dangerous in the first and second months of uterogestation than afterwards, and that retention of a portion of the ovum was then most likely to take place. He believed, on the contrary, that at that time the ovum was most likely to be expelled entire, and that the most troublesome cases of abortion occurred between the third and fifth months, when the adhesion of the chorion was more intimate than at any other period.

NOVEMBER 2ND, 1870.

E. J. TILT, M.D., Vice-President, in the Chair.

Present—38 Fellows and 6 visitors.

Dr. A. Henderson, Glasgow; Dr. F. W. Smith, Dorchester; and Dr. S. H. Wheatcroft, Sheffield, were elected Fellows of the Society.

Dr. WILTSHIRE exhibited an infant aged three weeks, and a boy aged a year and a half, children of a young married woman. The infant presented a remarkable specimen of the so-called "mothers' marks." The right arm was black and slightly hairy, the hairs being soft and downy. Scattered over the body—head, trunk, and limbs—were similar patches, varying in size from a crown piece to a threepenny bit. In other respects the child was healthy and well formed. As usual, the mother attributes the marks to an extraordinary mental emotion which occurred in the third month of her pregnancy. She had been frightened by a black cat.

The other child was born with a webbed condition of the middle and ring fingers of the left hand. During her pregnancy with this child she had burnt her fingers while ironing, her occupation being that of a laundress. Dr. Wiltshire wished simply to record these cases, in no way expressing an opinion as regarded their causation.

The following report by Dr. Meadows and Dr. Phillips on Dr. Heywood Smith's specimen of blighted ovum, exhibited at the June meeting, was read:—

The specimen referred for examination is that of a blighted

ovum, which has been preserved in spirit, and which measures about three inches in diameter.

Its uterine surface is irregular, presenting two elevations which occupy nearly half its entire extent. One of these is larger and more prominent than the other, but a section reveals the structure of both to be similar, namely, blood-clot, form laminated, reddish-brown in colour except for about an eighth of an inch from the surface, where the clot has become more decolorised. Although their margin is well defined, there is some infiltration of blood into the surrounding tissue, and the effusion extends to the fœtal surface of the placental mass, elevating it into irregularly shaped prominences, varying in size.

The inner surface of the amnion presents numerous small villous growths, which under the microscope are found to be composed of embryonic connective tissue. Some of them also appear to contain a small vessel. Growths resembling these are sometimes found on the peritoneum in conditions accompanied by great congestion, as in heart disease.

Springing from the middle of the amnion are the remains of the umbilical cord. The part adherent to the placenta is the size of a small pea, constricted at its base. The rest of the cord is separate and measures two inches in length, and at its extremity is the remnant of the embryo.

The cord is much larger in circumference than natural, apparently from an œdematous condition, the œdema having probably resulted from the obstruction to the placental circulation by the pressure of the effused blood.

Cases are not infrequently met with in which, during a twin pregnancy, one ovum becomes blighted and the other continuing in its normal course of development, so that a full-grown child and a shrivelled ovum are expelled at the full period of gestation.

Instances of the kind are recorded both in the 'Transactions' of our Society and in various obstetrical works. We believe that this specimen may be referred to such a class, the apoplectic condition of the ovum having in this case checked the growth of the embryo.

In twin pregnancies the placentæ are not always connected the one with the other; they may even be attached to opposite sides of the fundus uteri, so that in the specimen under consideration the non-adhesion of this placental mass to the placenta of the child which was born naturally does not, in our opinion, give any support to the view that this might have been a case of superfœtation.

A. Meadows.
J. J. Phillips.

EXTRA-UTERINE PREGNANCY. THE LEFT OVARY, AND THE FIMBRIÆ OF LEFT FALLOPIAN TUBE FORMED THE CYST, WHICH HAD RUPTURED, DISCHARGING FŒTUS, OF EIGHT MONTHS' GROWTH, INTO ABDOMINAL CAVITY; SURVIVAL TILL SIXTH DAY; NECROPSY.

By J. Hall Davis, M.D., F.R.C.P.,
PHYSICIAN-ACCOUCHEUR TO, AND LECTURER ON OBSTETRIC MEDICINE AT, MIDDLESEX HOSPITAL; PHYSICIAN TO THE ROYAL MATERNITY CHARITY.

Mrs. M—, æt. 39, of standard stature, spare habit, somewhat pallid; had been married twice, first when about eighteen years of age, giving birth to a healthy living child at term at nineteen. She had been married to her present husband six years. Her second pregnancy ended in a miscarriage of three months' gestation a year ago. She had up to this illness enjoyed average health. For the last few months the patient had suffered from indigestion and constipation.

Present illness.—Mr. Everett Norton, to whom I am indebted for seeing this case, has given me the following report of it up to my visit.

On the evening of October 20th Mr. Norton was requested by the husband to prescribe for his wife, and to see her next day, on account of a cough and general indisposition.

October 21st.—Patient was visited, and she reported that

on the 17th of October she was going down stairs in the dark when she slipped, but prevented herself from falling by clinging to the balustrade. She had not felt so well since, and had not perceived the movements of the child since the accident, although up to the slip she had felt them strongly and frequently. Pulse 108; face pale, a slight expression of anxiety; skin hot, dry; tongue clean; throat feels sore and dry; respiration normal; no pain of abdomen or elsewhere; abdomen enlarged by what appears to be the pregnant uterus, but not to the extent one would expect to find it at the seventh month of pregnancy, which the patient believes herself to have reached. On auscultation no fœtal pulsation could be heard, but an arterial murmur was distinctly audible over the abdominal enlargements. No fœtal movements could be excited by application of the cold hand to abdomen. The patient observed that her breasts had become much smaller since the accident. Vaginal examination failed to discover the os uteri in or near its usual situation.

Dr. Hall Davis was now (October 22nd) consulted, and he discovered the os uteri situated high up, close behind the upper margin of the pubes. In the posterior chamber of the pelvis he felt a rounded, hard mass, covered by reflected vagina; it appeared to him to be the fundus and upper part of body of the uterus retroverted and containing the fœtus. As it was evening, and the patient had very recently eaten with relish a mutton chop, any proposed interference and more minute examination were postponed till the following day.

23rd.—Abdominal examination detected nothing unusual. The abdominal tumour was situated centrally, and extended slightly above the umbilicus. No fœtal pulsation, but what appeared to be an uterine soufflet could be heard over the abdominal enlargement. The vaginal examination, Dr. Davis found, yielded the same conditions as before. He endeavoured by the pressure of a soft Turkey sponge, fixed to the end of a strong stem, to push up the mass occupying the posterior pelvic chamber above the pelvic brim, the patient being first chloroformed, but the endeavour was unsuccessful. The os uteri was

then dilated first by the index finger, next by a Barnes' dilator, but although the finger was enabled to reach pretty high up, no contents could be felt: a sound had previously been passed up to the supposed point of flexion. It was hoped, however, that labour pains would in time be induced by the irritation of the tent left *in situ*, and that delivery of the dead fœtus might soon be promoted. The chloroform treatment was discontinued, and the patient was visited again in the evening.

9.30 p.m.—The report now was that the patient had in the afternoon vomited a great abundance of green bile. The dilator had been forced into the vagina by the vomiting, and was now removed. The mass previously felt bulging into the vagina posteriorly was no longer perceptible, but there appeared in its place what seemed to be an empty bag. Some blood, but in small quantity, had passed from the vagina. Examination of the abdomen now discovered a great change of condition; on the right of the linea alba, in the lower part of the right hypochondriac region, and in the right lumbar region, there were discovered two bulgings, an upper one hard and well-defined, feeling like a child's head, and a lower one of softer consistence. This region of abdomen was very tender to pressure.

Dr. Davis, comparing his first examination early in the day with his evening examination, could not resist the conclusion that the child had in the interim escaped into the cavity of the abdomen. Yet, what was inferred to be the fœtus was discovered not to be so moveable, as most usually the fœtus is in such cases; and moreover the patient, beyond the vomiting, which had now passed off, did not exhibit any change in her general condition. The pulse was not quickened nor weakened, the respiration was normal, as also the temperature, and the exhaling function of the skin not excessive in its action. However, the impression remained that the child had actually escaped from an uterine rupture into the cavity of the abdomen, and Dr. Davis therefore contemplated, since there was no delivery possible by the pelvic canal, the performance of abdominal section. He

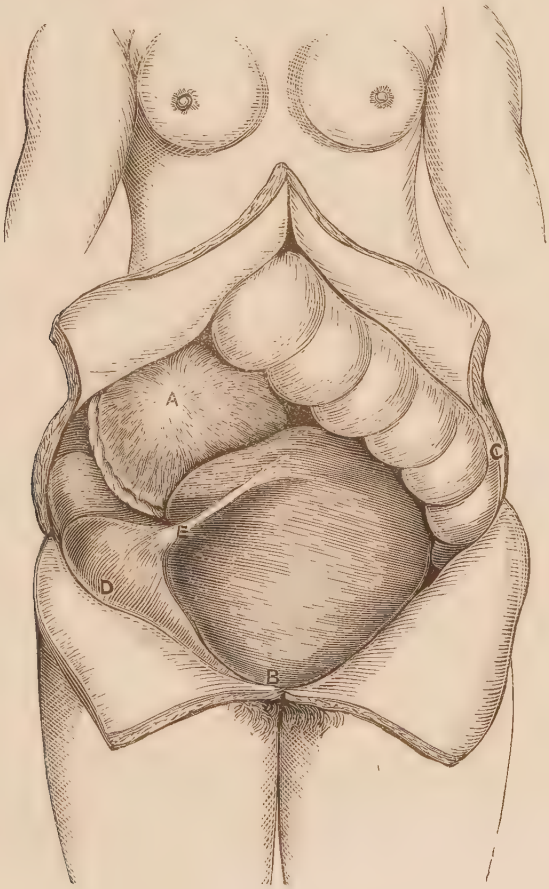
thought it would give the patient a chance of recovery. Dr. Davis here proposed, before proceeding to operate, that another opinion should be first obtained, and Dr. Gustavus Murray was called in; but as mobility of the child was absent, as well as all constitutional disturbance, he did not confirm the diagnosis of the child's escape into the abdominal cavity. At this inquiry, moreover, the uterus was felt to swell out and harden from time to time with contractions. Under these circumstances, although still convinced that the hard defined body now felt in the lumbar region, not there in the morning, must be the head of the child, Dr. Davis was deterred from the operation, and it was accordingly abandoned. An opiate was given to secure sleep and lull the pain, of which the patient complained, in the lumbar and right hypochondriac regions.

In the course of the next three days, more and more evidence of constitutional disturbance appeared. The pulse reached 140, although it did not become irregular till the last day of life. Jaundice appeared, and delirium, with frequent vomiting, and tympany of abdomen. Nourishment was steadily given by the rectum. Death took place at 2 p.m. on the 28th of October.

The post-mortem inquiry was held on 29th of October. —Present, Dr. Davis, Mr. Norton, and Mr. Everett Norton, Dr. Murray being unable to attend. The head and chest it was considered unnecessary to examine. The subject was somewhat thin, body not discoloured or tainted by decomposition.

Abdomen.—On laying open the abdomen, the appearances shown in the drawing, from a sketch taken at the time, were brought into view. The fœtus, the hairy crown of its head only visible, was found wholly escaped into the abdominal cavity, and deeply lodged in right lumbar region, having the liver above, the enlarged but impregnated uterus below, and lying in front of the lower parts of the child. In the hypogastric region, extending to above the level of the umbilicus, appeared a large cyst, of a livid tint from venous congestion, apparently involving the left ovary. Upon its anterior aspect, leading to the uterus, was seen the left Fallopian tube, its

fimbriæ lost on the walls of the cyst. The uterus, which presented a pale, uninjected appearance, was displaced into right iliac region, its neck elongated considerably to admit of



A. Fœtal head.
B. Tubo-ovarian cyst.
C. Intestines.
D. Enlarged uterus.

this displacement. The uterus was larger than any unimpregnated uterus usually is, and its muscular fibres more

developed; its cavity was more capacious, its mucous membrane was greyish but not putrescent, and exhibited slight traces of a decidua. A probe could be passed freely from the left angle of the uterine cavity along the Fallopian tube for some distance till the tube appeared to be, towards its fimbriated end, lost in the wall of the cyst.

The right ovary and appendages on the right of uterus were perfectly healthy.

The left ovary could not be seen in its usual situation and condition, but it was presumed to be lost in the cyst and to have formed it.

On examining the cyst in a general way the opening resulting from the rent was seen at its posterior aspect. The cord, of a livid colour, was continuous by its amnion investment with the amnion membrane lining the cyst. Into the cavity of the cyst there were seen bulging from its wall two or three considerable-sized elevations, produced by subjacent extravasations of blood or hæmatoceles. These occurred most probably at the time of the early vomiting, and perhaps before the rupture of the cyst. The amount of blood effused into the abdominal cavity did not amount to more than two or three ounces at the most. Mere traces of peritonitis were apparent. The large intestines were inflated and congested. Dr. Davis's first examination on the 23rd of October, and his second examination in the evening of that day compared together, enabled him, the absence of constitutional disturbance and immobility of the child notwithstanding, to arrive at the conclusion verified at the autopsy; that the fœtus had really made its escape into the abdominal cavity. Dr. Murray had not this advantage. The absence of constitutional disturbance, although unusual, Dr. Davis had on two occasions of uterine rupture and escape of the child into abdomen, known to be absent for several hours, and therefore he was not deterred by that circumstance from arriving at the diagnosis which he had formed.

The non-mobility of the child under the taxis in the above case was explained at the post-mortem inquiry, in which it

was seen to be deeply impacted in the lumbar region, having the liver above, the cyst heavy, with its hæmatoceles and attached placenta below, and to its left as well as partly in front, the enlarged uterus being below and to the right of the middle line.

Had this indeed been a case of rupture of the uterus instead of an ovarian cyst, Dr. Davis believed it would have been undoubtedly the proper practice to have removed the fœtus by abdominal section. But, in the circumstances of this case, would the patient, after abdominal section and the necessary removal of the cyst with the placenta, as well as the fœtus, have been left with the smallest hope of recovery? Seeing how long the patient was in showing constitutional disturbance, Dr. Davis was the more inclined to think that at all events she would have been afforded some slight chance of recovery, even after so severe an operation, especially when considering what recoveries, totally unexpected and thought to be impossible, have followed some severe ovariotomy operations, which he and others had witnessed; whereas the retention of the ruptured cyst and fœtus in the abdomen rendered the above case entirely one without any chance whatever in favour of recovery.

The advanced age of the fœtus, of eight months' gestation at least, was (although not wholly without precedent) of rare occurrence, excepting in ventral pregnancies, where the fœtus commonly grows to full time, and occasionally as is found in the rarer variety, viz., of parietal or interstitial gestation; the period of rupture and death of the fœtus in tubal pregnancy being two or three months, that of ovarian very rarely indeed beyond four or five months.

Dr. Wiltshire said that the candour with which Dr. Davis had brought forward and related the circumstances of his very interesting and difficult case could not sufficiently be admired. The Society could not fail to be instructed by Dr. Davis's experience. Dr. Wiltshire asked whether the uterine sound had been used, as it fairly might in such a serious case. He mentioned a case of supposed extra-uterine fœtation which was under his own observation, and acknowledged that Dr. Davis's case would

aid him in dealing with it. He thought that it was to be regretted that gastrotomy had not been resorted to in this case, for as far as he was enabled to judge no insurmountable difficulties would have been met with, and the patient would have been afforded a chance of recovery which otherwise she had not. In reply to Dr. Murray's remarks that the opinion of four doctors was against the operation, Dr. Wiltshire answered that the result as evidenced by the post-mortem examination clearly showed that gastrotomy was the only operative measure which could have relieved the patient.

Mr. J. B. Walker, of Clifton Gardens, exhibited a placenta which had been retained in utero two months. Mrs. G—, æt. 23, first pregnancy, aborted at four and half months. The fœtus alone being expelled, Mr. Walker saw the patient soon after, and noticed that no hæmorrhage had taken place. He separated the child and at once sought for the placenta, but after a most careful examination it could not be found. Three days after this Dr. Murray saw the case.

The patient until the expulsion of the specimen, exactly two months after the abortion, had lost no blood whatever neither had there been any offensive discharge. She had been able to attend to her household duties, and was in every other respect perfectly well a few days after the escape of the fœtus.

Ergot had been given freely, and Condy's fluid used as an injection, during the first week after the abortion.

Dr. Murray said that this case was interesting in a practical point of view, and was also one of rare occurrence, for here was an entire placenta which had been retained in the uterus for a period of sixty days without even once giving rise to hæmorrhage or becoming decomposed. He (Dr. Murray) on seeing the case had no difficulty in introducing the finger into the uterine cavity; and this was done on three successive days, but on each occasion no part of a placenta could be reached. The umbilical cord came away without traction almost immediately the finger entered the uterus at the first examination.

The patient having now lost no blood whatever for six days,

having little or no discharge, with no odour, and feeling well, he agreed with Mr. Walker that it would be better to watch the case closely and wait, and upon the least occurrence of bleeding then to redilate the os uteri and again seek for the placenta. He (Dr. Murray), feeling sure that the placenta must have been *firmly* and *completely* adherent to the fundus of the uterus, considered under the circumstances that a further dilatation and forcible attempt at removal would in all probability have resulted in leaving portions of the mass behind, which would have caused frequent hæmorrhage and perhaps septicæmia. Though departing in this instance from the usual line of treatment, he considered it prudent, and indeed almost imperative, always to remove the belongings of an abortion if within reach, and especially so if portions had escaped or hæmorrhage were present.

ON THE MANAGEMENT OF CHILDBED WITH A VIEW TO PROMOTE SUCCESSFUL SUCKLING.

By Wm. Martyn, M.D., F.R.C.S.

It is a remarkable fact that young and vigorous mothers often fail in yielding a sufficient supply of milk to their offspring, resulting in more or less disappointment to the mother, and serious loss of infant life. I am not aware of any simple and sufficient explanation for this fact as generally accepted. It will be my endeavour in this short paper to make up this deficiency.

When the mammæ are well formed and the woman is healthy, it is natural, of course, that there should be a full supply of milk for the new-born infant in all cases. That it is not so is well known to all of us. There are obvious reasons, of course, for this failure in some instances—very advanced life, severity of labour as to duration, great losses of blood at or about the time of labour, have each their effect on the function of the mammæ; but of all the disturbing causes of this function I think it may be set down that childbed fevers have the most decided effect. Few, I am sure, will

dispute this proportion as far as the graver forms of fever go, nor will they be disposed to doubt the effect of the minor degrees of fever on lactation, if they will look back on their own experience, or, in other words, take the teachings of childbed.

A young strong woman is taken in labour; she gets over it pretty well; before the third day she is feverish, pulse perhaps not more than 100, lochia offensive, uterine region a little tender, breast rather full and tender (the feverish state in such cases is often put down by the nurses to the coming in of the milk), but there is no sufficient supply of milk, the baby cannot get milk and does not to the end. This is a very common case in my experience. There can, I think, be little doubt that the fever is the cause in such cases of the failure of the mammæ; such failure in the mammary secretion is more frequent in primiparous cases; but are not fevers more frequent at such times?

If, then, we would cultivate good nursing more attention must be paid to these minor fevers. Accoucheurs are often disposed to look lightly upon all those feverish states when the pulse does not run up high, and put them down as more or less natural attendants on childbed. But I think it can be shown that for the most part they depend on those contaminating influences, such as offensive discharges, present more or less in all labours. As an example, a lady who had borne and nursed well many children was confined in January last, and she had some hæmorrhage. After labour clots were retained and through bad nursing the lochia became highly offensive, a serious degree of fever followed, and ultimately a white leg. On having the womb washed out with dilute Condy's fluid, and using this fluid freely, the fever was soon controlled, but there was no milk.

Mrs. —, as fine a looking young creature as could be seen, was confined; the labour was ordinary, primiparous. She had some fever a few days after, and inflammation about the uterus. She had no milk, although from the vigour of the patient there was every right to expect abundance. The case was not mine; I was called in at a subsequent stage of

the confinement. I could multiply these cases extensively, but the experience of the members will be sufficient to afford them ample examples on this point.

If, then, it can be shown that for the most part all feverish attacks tend to disturb the mammary functions, then they become doubly important to the accoucheur, apart from any question as to how far they affect the life of the patient.

Our aim, then, must be to diminish that great evil of failure in nursing, and so to guide our patients through their confinements that they do not take fever. Can this be done? It is certain that child-bearing is a natural process and ought not to be attended with fever, although it must be admitted that the conditions are particularly rife at this time for contaminating the blood, by which we all know these fevers are produced. What are they?

1st. Often an exhausted system from the effects of labour.

2nd. Exposed channels or vessels in the uterine cavity.

3rd. A vaginal surface more or less torn or bruised, at all events in primiparous cases.

4th. The retention of discharges or clots of blood more or less from the position of the patient, until they decompose.

To guard against these many avenues of contamination, what may be done?

1st. A firm binder should be applied, as is customary, directly after labour, but I would have a gentle pressure by the bandage kept up so as to favour outflow until that period arrives when it may be supposed that open vessels or raw surfaces are closed, the object being, of course, to oppose absorption as much as possible.

2nd. A patient should not be confined on a feather bed, but rather on a suitable mattress, and with support about her, she should be raised on a vessel to pass her discharges; at the same time she should be freely sponged.

3rd. Some dilute Condy's fluid or carbolic acid should be injected freely night and morning in primiparous cases, and

if there be the slightest taint in the discharges in any case, then the disinfectant must be used freely and a saturated rag kept in the vagina if necessary.

The practitioner should direct these operations, the nurse, of course, carry them out. If done effectually, I believe they are the surest means of preventing those lesser childbed fevers, white leg, pelvic inflammations, and those many other complications so often met with.

In promoting the activity of the breasts there are other points demanding attention, such as diet, &c., but these are of minor consideration; our patient, conducted through childbed without fever, will be found to have the mammæ well disposed for their new function. It is desirable that the infant should not be put too soon to the breast, for milk will not be found in very sufficient supply until about the third day, neither does the infant require much at this period; when it becomes restless, then the child should be put to the breast, and mostly an ample supply will be found for it. If you attempt to feed a new-born infant, not more than a few teaspoonfuls can be got down of milk or any other food; a new-born infant should be let alone, placed near to the mother's breasts, in perfect shade, and not disturbed for anything, until it becomes restless. As in the case of the economy of the mother, so in the child, the breasts in the one case, and the stomach in the other are not prepared at once to enter upon their work.

It is a common practice to put the child to the breast soon after birth, and to persist in such trials from day to day, often to the distress and anxiety of the mother, &c. Now this is unwise and irrational; wait for the milk.

How far does marital congress, as nursing progresses, affect the supply of milk? It is said by some favorably, but this must be a mistake on the whole, for in promoting the activity of the genital organs, what is more probable than that the mammæ would suffer? Menstruation at least is favoured by congress; when this takes place we know that a mother is no longer fitted to nurse: pregnancy, of course, brings nursing to an end.

Much reliance is placed on malt liquors as favouring the supply of milk, but I think vastly too much—a little malt liquor, not of the stronger kinds, taken at meal times is all that is desirable and useful for the object of nursing. I have not much experience of the effects of certain drugs in favouring a supply of milk, but I do believe firmly in the help that may be had from the free use of gruel. To give a case in point. A lady, æt. 46, her ninth confinement, had been a good nurse, that is, had a very full supply of milk for her first several children, but for two or three previous to this last she failed so much as to require a wet-nurse for her children; she had on these occasions taken freely of malt liquor, thinking thereby to get sufficient milk; in this last confinement she was most anxious to nurse her child; I advised the free use of gruel; she took gruel very freely and very little malt liquor; she had an ample supply of milk, never more. The only evidence of a good supply of milk is the perfect contentment of the child, and the readiness with which the breasts yield plentiful streams on being grasped, the mere appearance of milk on pressure, the wetting of the dress, or the large size of the mammæ, are not evidence of such supply.

Much is said of habits of life, town life, feeble constitutions, &c., as interfering with the due function of the mammæ; and there can, I think, be no doubt that these influences are capable of producing some effect; but why, if they allow of child-bearing, should they not of child-nursing? why should the mammary function be especially affected?

Dr. Thomas Ballard said the paper was of interest and value because it advocated a point of practice which he thought of very great importance, viz., not to allow the child to be put to the breast until the third day after delivery. Ten years since he had invited attention to this point, and had endeavoured to prove that the feverishness which the author indicated and the more severe forms of illness called milk fever, are mainly caused by the practice which he regretted was still generally taught, that of putting the child to the breast within a few hours of its birth. The reasons for doing so are not valid. The principal one, that

of producing uterine contraction and thus arresting hæmorrhage, does not often apply, because the accoucheur would usually satisfy himself on this point before he left the patient, and consequently before the nurse had prepared the child to go to the mother. The other one, that of the child getting colostrum to purge away its meconium, was a misconception. No milk is secreted for sixty hours, and the irritation of the child's bowels caused by early sucking is the result of its sucking at a breast which yields nothing (fruitless sucking), and not of its swallowing a fluid possessing a cathartic property. Dr. Ballard hoped that this mythic theory about colostrum would soon disappear.

A CASE OF INVERSIO UTERI.

By J. W. S. Coward, J.P., Christchurch, New Zealand.

The case of inversion of the uterus which I am about to describe is sufficiently noteworthy as an instance of unusual obstetrical accident, but more especially is it deserving of record in consequence of the manner in which similar casualties have been noticed and commented upon in the ordinary text-books upon midwifery. Mrs. K—, the subject of the following remarks, a primipara, tall, and well developed, 22 years of age, has been married fifteen months, and before that had always menstruated regularly. About three months after marriage she miscarried, and once again when about five or six weeks advanced in pregnancy. I was called to her on the 30th of March last at 10 p.m., labour having commenced about 5 p.m. I arrived at her house, a distance of eight miles from Christchurch, about 11 p.m., and found her cheerful, the pains frequent and strong, the os uteri fully dilated, the head presenting and the membranes unruptured. In half an hour she was delivered of a healthy female child, rather below the average size. Having tied and divided the funis, which was about the usual length, I sat by the bedside making gentle traction upon the cord, just sufficient to enable

me to judge when the uterus had again begun to act, and in a few minutes, with one or two violent contractions and strong expulsive efforts on the part of my patient, the placenta was expelled. Upon putting my hands under the bedclothes to remove it I discovered what I at first took to be a large fibroid tumour, but which, on passing my fingers upwards and around, I soon made out to be the uterus itself. I then turned up the bedclothes, and upon ocular examination found the placenta attached to the fundus; a considerable amount of hæmorrhage was going on, the woman threw her arms about, sighed frequently, and altogether exhibited alarming symptoms of shock and exhaustion. The pulse being weak and rapid, I at once sent for assistance, then administered brandy and proceeded to return the inverted organ. First removing the placenta, which was easily accomplished, I grasped the uterus firmly, and by slow and continuous pressure in about a quarter of an hour succeeded in replacing it. The relief was immediate; I then gave a dose of ergot, and during two hours continued to watch for any return of bleeding, which happily did not come on. By this time my partner, Dr. Powell, arrived with Dr. Nedwill, and upon again making a vaginal examination we found a partial return of the displacement. Dr. Nedwill then assisted me by firmly supporting the abdominal walls whilst I introduced my hand into the vagina and again succeeded in replacing the uterus. I would remark parenthetically that no noise or sudden jerk accompanied this, as is often said to be the case. Having given a full dose of opium and waited another hour I left the woman comfortable, and she has continued to progress favorably towards convalescence.

Upon reference to the works of obstetric writers I find that the majority ascribe this casualty to violent and undue traction upon the umbilical cord.

Ramsbotham, page 456, says, "Whenever this serious accident has happened, which may *generally* be looked upon as the consequence of improper treatment, although it may certainly occur spontaneously and without any force having been applied to the funis, &c."

Dr. D. Davis, in his, 'Principles and Practice of Obstetric Medicine,' p. 1084, says, "The more frequent cause of inversion of the uterus is such an unusual brevity of the umbilical cord that, being put on the stretch by undue or premature traction, made by the practitioner during a relaxed state of the uterus, its inversion follows almost as a matter of course." Meigs, page 546, says, "Notwithstanding the occurrence might take place spontaneously and immediately after the birth of the child, yet, in a major part of the examples, it has been produced by improper haste and impatience to get away the afterbirth."

It seems that neither of the above-named writers had witnessed this accident, and were therefore personally incompetent to give such decided and dogmatic opinions as above quoted in reference to the cause of the inversion. In the case which I have described I believe the accident arose from want of tonicity in the fibres of the os, and the previous miscarriages point to such a conclusion. The violent expulsive efforts made by the woman unquestionably contributed to the catastrophe.

Five and thirty years of active practice, including several thousand cases, *would*, to a certain extent, preclude me from animadversion even had the case been fatal, but I cannot divest myself of the feeling that great professional loss might have befallen some of my junior brethren under similar circumstances; and I do hope that those members of this Society who, from experience and proficiency, are competent to speak upon the subject will do so firmly and decidedly, and thus help to check the expression of supposititious causes which have no value in debates upon practical questions. Finally, if I may do so without appearing egotistical, I would desire to express my approbation of the manner in which Dr. W. Tyler Smith has described two cases of inversion in vol. x of the 'Transactions' of our Society, and would especially direct attention to one passage, in which he says, "I have endeavoured to demonstrate that inversion of the uterus is often the result of an active and not a passive condition of the organ, and that it is not, as was formerly supposed, attri-

butable in all or even the majority of cases to traction of the cord in the attempt to remove the placenta."

A CASE OF INVERSIO UTERI.

By Henry M. Madge, M.D.

I have thought it worth while to bring the following case of inversio uteri before the Society, partly because such cases are rare, and partly because it may serve some useful purpose now and then to revive in the minds of the Fellows the main features of such an accident; for, upon the prompt recognition of its nature, followed by immediate action, the fate of the patient depends.

Mrs. P—, æt. 24, healthy and well made, had passed through her first pregnancy without any unusual symptoms, except that towards the end she became exceedingly large. Labour commenced on the morning of August 22nd, and the patient was delivered the same evening of a very large child. There was also an excessive quantity of liq. amnii. After the child was born and removed I directed the nurse, as I am in the habit of doing, to place her hand on the patient's abdomen and press downwards pretty firmly. In a few minutes, in gathering up the cord to get away the placenta, I found that it had already partially passed beyond the vulva, and in trying to remove it I found still further that it was partly adhering to a large, round, hard tumour, with a rough bleeding surface. I immediately placed my hand above the pubes, and, not feeling the uterus, was at once convinced that it was turned inside out. The placenta was not morbidly adherent. It peeled off quite easily, and without hæmorrhage. I then grasped the tumour, and after compressing it as much as I could I applied my bent fingers to the fundus, and firmly pressed it upwards. It gradually receded, and at last suddenly slipped from my fingers into its place with a

"jerk." The vagina was put considerably on the stretch during the operation. After the reduction the uterus contracted firmly as if nothing unusual had occurred. About this time the patient felt a little faint, but it soon passed off. From first to last there was no collapse, sickness, hæmorrhage, nor even pain—nothing, in fact, to indicate at the moment of its occurrence that inversion had taken place. The patient made an excellent recovery.

Remarks.—In seeking the cause of the inversion in this instance it may perhaps be found in the overdistended condition of the uterus, and perhaps the application of pressure, too early, to the fundus—that is, whilst the uterus was still lax and uncontracted. Traction on the cord had certainly nothing to do with it. Would it not be safer in all cases to apply post-partum pressure to the uterus more to the body than to the fundus; from before to behind rather than in a downward direction? Among other points of interest about the case there is the absence of hæmorrhage on peeling off the placenta, confirming views which I have long held as to the source of uterine hæmorrhage, showing moreover, notwithstanding the opposite views of many high authorities, that it may be done with impunity; but the chief point of interest and satisfaction to me was the great ease with which I was enabled to convert a very formidable occurrence into a comparatively simple and harmless matter.

Dr. J. Braxton Hicks remarked that in the cases he had seen there had been no traction by the medical man on the cord. In one case the patient had not been touched, as the placenta had been expelled spontaneously before the attendant's arrival; and in another it occurred immediately on the delivery of the child by the forceps in a case of inertia of the uterus. He thought that a short funis in many cases would be sufficient to commence the action if the fundus were flaccid. In answer to Dr. Madge's objection, Dr. Hicks said the vaginal attachment coupled with the atmospherical pressure, he considered, would be amply sufficient to cause a cupping of the fundus and thus commence the process.

Dr. Hall Davis believed that we must admit two classes of cases of inversion of the uterus occurring in connexion with labour:—Firstly, those resulting from traction at the umbilical cord, however applied, either in the third stage of labour by the hand of the attendants, the placenta being as yet attached to the fundus of a relaxed uterus; or during the completion of a second stage of labour, the advancing child dragging on a short cord as explained by Dr. Hicks; or again, during sudden birth of the child, the parturient being in the erect posture. Secondly, those cases in which the displacement was the effect of an inverted action of the muscular fibres of the uterus, occurring either before or after the extrusion of the placenta, quite independently of, and often in the absence of the attendant. The latter class of cases he held to be the most frequent; such at least was his experience.

A SHORT HISTORY AND DESCRIPTION OF THE LYING-IN HOSPITAL AND INFIRMARY FOR DISEASES OF WOMEN AND CHILDREN AT MELBOURNE (AUSTRALIA), WITH SOME ACCOUNT OF WHAT HAS BEEN DONE IN IT.

By Richard Thomas Tracy, M.D., L.R.C.S.I.,

LECTURER ON OBSTETRICS, UNIVERSITY OF MELBOURNE; PHYSICIAN TO THE LYING-IN HOSPITAL, ETC. ETC.

I have thought that it would be of some interest to the Members of the Obstetrical Society to be informed as to the progress that has been made in this distant colony of Victoria, in the treatment of the surgical diseases of women, and now avail myself of the presence of my valued colleague, Dr. Martin, of Melbourne, who is on a visit to Europe, to lay a few facts before the Society.

The Melbourne Lying-in Hospital and Infirmary for Diseases of Women and Children was founded in 1856. The institution was originated by the late lamented Dr. John Maund and myself, and after being in operation on a small scale in a hired house for about two years, the Government gave a grant of two acres of land, close to the

university, in an excellent situation. The present building was erected at a cost of over £6000, and is supported by voluntary subscriptions, supplemented by an annual Government grant on the same principle as that in force with all the other charitable institutions of the colony.

My first colleague, Dr. Maund, and myself gave much time and consideration to the plan of building this the first lying-in hospital in Australasia, having in view the evil results that accrue wherever parturient women are crowded together; feeling, in fact, that a lying-in hospital was absolutely required, and that by no other means could efficient aid be afforded to a most helpless class. We at the same time endeavoured to so arrange the building as to bring the evils of such an institution to the lowest point.

To the great regret of all who were interested in this work, Dr. Maund died in the early part of 1858, shortly before the hospital was completed.

The main building is of two stories, and is solely devoted to the reception of women awaiting their confinement, to women who have been accouched in the midwifery wards (to be presently described), and to women suffering from the diseases peculiar to their sex. It also contains board room, quarters for resident surgeon and matron, room for students to stay in while attending practical midwifery course in connection with the university; also an operating room.

At the rear of the main building, and in immediate connection with it, we have a range of single wards, a room for the head nurse or senior midwife intervening. Those are the midwifery wards. They are each twelve feet square, twelve feet high, have each a fireplace, a window-ventilator in wall, and moveable fanlight over door; the walls are painted for about five feet from floor, the remainder limewashed. An eight-feet wide verandah runs along the entire range of wards; this abuts on a garden or shrubbery, at the other side of which is a similar range of one-storied buildings forming kitchen, storeroom, laundry-room for airing and fumigating mattresses, servants' rooms, &c.

At a little distance from the main building is a separate and very complete building for the out-patients' department. This contains the apothecary's shop, a large waiting-room, consulting-room, and private room for examining patients.

Having thus very cursorily explained the plan of the hospital, I will devote a few words more to the past and present history of the institution. The decease of Dr. Maund leaving a vacancy in the honorary staff, Dr. W. M. Turnbull was elected, and continued to hold that position till his death, which occurred in 1867. He took a warm interest in the institution, and devoted much time and energy in the performance of his duties, both in the midwifery and infirmary departments. Many very interesting cases have been placed on record by the late Dr. Turnbull in the pages of the 'Australian Medical Journal.' He was a member of the Obstetrical Society.

Dr. Martin, who will, I trust, bring this paper before you, was elected to fill the vacancy left by Dr. Turnbull's death; and last year, it being considered desirable to increase the honorary staff to three, Dr. G. H. Fetherston was elected.

Besides the three honorary medical officers, we have a resident-surgeon; Mr. Avent, formerly Assistant-Surgeon 66th Regiment, now most efficiently occupies that post. A resident matron manages the whole of the household affairs, servants, &c. The honorary surgeons take charge of the midwifery wards week about. All ordinary cases are attended by the senior midwife and resident-surgeon, aided by pupil nurses, and at certain seasons of the year when dissections are not going on by the pupils of the practical midwifery class. Any complication occurring, the honorary physician of the week is sent for.

The hospital is incorporated under Act of Parliament, and its affairs are managed by a committee of twenty-two ladies and ten gentlemen. The ladies' committee meet every week for the admission of patients, and to supervise all the working of the institution. The gentlemen's com-

mittee meet once a month, or whenever any matter of detail requires their advice.

Women requiring admission procure a ticket from a subscriber, and attend at a meeting of the ladies' committee, who inquire into the circumstances of the case, especially as to the patient's means; and, if approved, the ticket is endorsed, and the patient is told to come in when her accouchement is approaching.

Any woman actually in or threatening labour who applies at the hospital is freely admitted whether she may have procured a ticket or not.

When first admitted, if not yet in labour, she is placed in one of the large wards of the main building. As soon as labour commences she is moved to one of the midwifery wards, and does not return to the main building until nine days after her labour, and not then except she is perfectly well. Except the hospital is crowded, we do not place more than one convalescent patient in each of the small wards; never more than two. Frequently the patients beg to have another in the room for company. If any complications occur in the labour, or any bad symptoms during convalescence, we keep the patient entirely isolated. When quite convalescent she returns to a ward in the main building, where she remains till she leaves the hospital, which is generally about the fourteenth day.

After the patient leaves the special ward the mattress is removed to a room provided with racks, the walls formed of louvre boards, where it is exposed to a constant current of air, is, if necessary, remade, and not brought into use again for some time.

Up to the present time we have, I am most thankful to say, been quite free from puerperal fever in an epidemic or virulent form, and the few cases of true puerperal fever that we have had in the hospital did not differ in any respect from those that occurred in the course of private practice. One great advantage of the separate ward has been the avoidance of all emotional excitement to the patients. If there was a bad case the other patients knew nothing

of it, and were never witnesses of any suffering or fatal result.

The average number of women accouched each year is 360. Since the commencement of the hospital there have been 3931 women accouched. Of this number 49 died, or 1·24 per cent.

The causes of death were various. A considerable number died from diseases unconnected with the puerperal state, and the number of cases of puerperal convulsions has been far greater in proportion than that shown by the statistics of European lying-in hospitals. My friend, Dr. Martin, has already drawn attention to this in a paper read by him before the Medical Society of Victoria. I can confidently assert that no cases have yet occurred in this hospital which presented the characteristic symptoms of epidemic puerperal fever such as I have witnessed in lying-in hospital practice when a student. They have been isolated cases, and some of the worst we have had have been in young women who were without relatives or friends in the colony, who had been either seduced or were deserted wives, often coming from a long distance up country, and having undergone much privation, fatigue, and distress of mind. The bad symptoms in some of this class of patients were low forms of peritonitis, uncontrollable irritability of stomach, tympany, exhaustion.

I will not further trespass on your time with this rough sketch, especially as I write it in the hope that my colleague will be on the spot to explain any point in the working of our little hospital that I have omitted to elucidate sufficiently.

I now pass on to say a few words about the infirmary wards. Those are all situated on the upper story of the main building; are large, lofty, and well ventilated; they open on to a corridor which runs the whole length of the building, and which has windows overlooking the garden, and also a window at each end to ensure a perfect current of air to the corridor without causing draughts in the wards.

In this department I have performed every operation

connected with the surgical diseases of women. I have performed ovariotomy seven times; result—five recoveries, two deaths. I may state that I have also performed this operation twice in private practice; result—one recovery, one death. Total, nine cases; six recoveries, three deaths. Particulars of each case I have already published in the 'Australian Medical Journal,' with the exception of the last two. Two of them turned out to be malignant, and I operated against my convictions, but yielding to the urgent entreaties of the patients. One of my patients, whose right ovary was removed by me in November, 1868, was safely delivered of a living child about four months ago. Another has married since the operation, became pregnant, and miscarried at third month. All those who recovered are still alive, and in excellent health.

I have performed the operation for cure of vesico-vaginal fistula twenty times in this hospital with perfect success in every case but one, a very complicated case, in which a very small opening remained. She went into the country to recruit her general health, and did not come under observation again. Several of those cases were very extensive and of many years' standing. I believe I may state that I was the first to perform this operation as well as ovariotomy with successful result in this colony. After my first few cases I discarded all clamps or plates in this operation, simply twisting the wire sutures by means of the very efficient little instrument first brought to my notice by Sir James Simpson, from whom I have to acknowledge many kindnesses.

The various plastic operations for cure of ruptured perineum I have performed over thirty times, including the modification for permanent cure of prolapsus uteri. I have noticed from time to time discussions reported in which many able surgeons gave it as their opinion that prolapsus uteri is not permanently cured by the operation. I cannot agree with this. I can point out several women on whom I operated seven, eight, and ten years ago, who are able to work hard without any return of the prolapsus. I have for

many years performed the operation in the following way: instead of taking off the side slips of the mucous membrane as recommended by Mr. Baker Brown, I dissect off very cautiously an oblong piece of mucous membrane from the anterior wall of the vagina, or floor of the bladder: this I do by getting an assistant to keep the part stretched by means of a full-sized female catheter introduced into the bladder. I bring the edges of this raw surface together by thread sutures, which I leave to cut themselves out. I also denude a square portion from the posterior wall of the vagina extending upwards from the inner margin of the primary crescentic raw surface, as made in the ordinary operation for ruptured perineum. This I treat in the same way as that on the anterior wall of the vagina, and then bring the primary wound together by deep and superficial wire sutures in the ordinary way. By these means I not only form a new and extended floor to close in the outlet, but I also lessen and contract the calibre of the vaginal canal.

All the varieties of intra-uterine tumours have been represented in our wards, and I have from time to time published in our Australian Journal the particulars of some remarkable cases. I am at present jotting down a report of one very peculiar case of uterine polypus, and had intended to send it along with this paper, but I fear I have already trespassed too much on the patience of those to whom these very crude and hastily written remarks will be read.

In commencing to perform those operations in this colony, I laboured under disadvantages which can hardly be realised by those who are able to see them performed by others.

I left England in 1851, and had never seen the operation for cure of vesico-vaginal fistula, ruptured perineum, or ovariotomy performed. I mention this more particularly to give me an opportunity of gratefully acknowledging the extreme kindness of Mr. Spencer Wells in corresponding with me, especially on the subject of ovariotomy. My first case was in private practice, and under all the circumstances

caused me much anxiety. I could not have entered on the task with anything like confidence but for the minute and elaborate advice most kindly sent to me by Mr. Wells.

My colleague, Dr. Martin, has had some very interesting cases, but I leave him to speak for himself.

The object of this paper being chiefly to make the Society aware of the existence and general design of the hospital, I have refrained from minute details, and hope to send further communications from time to time.

Dr. Martin (of Melbourne) begged permission to read portions of a letter received by last mail from Dr. Tracy, which might be considered as a supplement to the paper just read. Writing in September, Dr. Tracy says:—"I have had a good deal of work at the hospital—induction of premature labour, several cases, one of them a wretched pelvis; bipolar version stood the test well. In one bad case of mania (puerperal) the hydrate of chloral acted like a charm. I have performed ovariotomy twice lately. One a thoroughly good case, as the adhesions were strong and several bleeding points had to be tied; the case did splendidly. The other was done a few days since; an anxious point in the diagnosis was the fixed position of the uterus, and an inability to pass the sound. This was accounted for at the operation, as one of the sacs containing thick gelatinous matter was found to be jammed down into the pelvis; it was only slightly adherent to adjacent parts. A good pedicle, treated in the usual 'exterior' way, only omental adhesions; operation over in less than thirty minutes. She is going on well; not the slightest bad symptom." As one of Dr. Tracy's colleagues at the Melbourne Lying-in Hospital, he (Dr. Martin) would take the opportunity of stating before the Obstetrical Society that Dr. Tracy was entitled to the highest credit and consideration for his performances in obstetric surgery at the far antipodes. With none of the advantages which are available in the older countries of witnessing the operative procedure of the great lights of modern surgery, Dr. Tracy has been always a watchful observer of whatever was worthy of notice in the reports of scientific progress, and has made himself, as it were, a pioneer of obstetric surgery in Australia, leading the way with remarkable skill and signal success in the performance of all the great operations. As regarded the report of the "Melbourne Lying-in Hospital and Infirmary" just read, he (Dr. Martin) would assure the Society that in construction and management, and in the character and results of the work done in it, that in-

stitution would bear comparison with any other of the kind in any country.

Mr. Lennox Browne desired to bear testimony from experience of several visits when in Melbourne seven years ago to the excellence—he might almost say perfection—of the arrangements of Dr. Tracy's lying-in hospital. He had witnessed Dr. Tracy twice perform ovariotomy, as well as several other obstetric operations, and he was astonished to see how, from perusal only of the writings of workers in this Society, and without the guide of personal teaching, Dr. Tracy operated according to the very latest improved methods, and with at least equal success. He thought the Society was to be congratulated no less than Dr. Tracy, in that it was shown of how great use were the printed "Transactions" to those fellows unable to associate in person.

ON THE MORTALITY IN THE LYING-IN WARD OF THE CINCINNATI HOSPITAL.

By Dr. George Mendenhall.

PROFESSOR OF OBSTETRICS IN THE MIAMI MEDICAL COLLEGE, CINCINNATI; CONSULTING MEDICAL OFFICER IN THE OBSTETRIC DEPARTMENT OF THE CINCINNATI HOSPITAL.

(Communicated by the President.)

I have been greatly interested in the history of the Florence Nightingale lying-in wards of King's College Hospital, London, by Charles Rowling, late resident accoucheur, &c., as reported by Dr. Playfair in the 'Transactions' of the Society for March 4th, 1868.

It reminds me of some experience of my own during the months of January, February and March of the present year in the lying-in department of the Cincinnati Hospital.

For two years preceding January 1st, 1869, the patients of this hospital occupied temporary quarters while removing the old and building a new hospital. On the 1st January the new building was occupied by all classes of patients.

The building consists of six pavilions of three stories each, with a dry, elevated basement; three of these are on either side of the grounds, and connected in the front by an ample administrative building, and in the rear by the culinary arrangements and some other accommodations.

The pavilions are not in the same line but connected laterally at their ends by open corridors, twenty to thirty feet in extent, so that each pavilion had no direct connection with any other, there being a free circulation of air between them.

The hollow square is occupied as ornamental grounds, fountain, &c. The whole six pavilions, being three on the east and three on the west side of the grounds, intended for six hundred patients, or an average of one hundred each in the three stories of a pavilion, the upper one of which is enclosed by a mansard roof. The wards are approached one from the other at the ends by an iron staircase connected by a hall and two intervening doors with the wards, which may be kept closed if thought best. All the rooms or wards are well supplied with windows which I think give the most desirable ventilation. The whole is heated by warm air from coils of steam pipes. There are also fireplaces which may be used for ventilation and warmth. An air space of 1500 to 2000 feet is allowed for each patient. Without consultation with me the trustees placed surgical patients in the lower room, medical in the second, and the obstetrical patients in the third or attic story. The ventilating arrangements are connected with the chimney stack, for the engine at the rear end of and between the two rows of pavilions. This arrangement was looked upon as complete in a hygienic point of view.

On the 1st January this year I took charge of the lying-in department. Soon after I discovered that the patients convalesced slowly and unsatisfactorily. Unusual feverish symptoms, red tongue, tendency to diarrhœa, &c. &c., culminating in attacks of metritis, peritonitis, fever, &c. so that on the 4th February one died, on the 29th another died, and on the 13th of March another. From January 1st to

April 1st there were fifty-three cases of labour, thirty-seven of these between the middle of January and the middle of March,—the period of increased mortality.

I was dissatisfied and puzzled as to the possible or probable cause of the disturbance of health in the ward. I did not think it possible that this new building, apparently perfect in all its appointments, could be at fault, and was for a time hoping daily that a cessation of difficulties would occur, supposing the succession of cases were mere coincidences. I hardly knew where to begin my investigations. I however began with the ventilation, and soon found that the ventilating current, instead of flowing *from the ward* into the chimney stack was flowing *into the ward* from the surgical ward below. This led to the closure of the openings by which air was expected to pass out, and the use of the abundant windows was resorted to. Thermometers were placed in the wards so that the temperature might be regulated by the admission or exclusion of the warm or cold air, as might be necessary. Since March 13th to the date October 10th not a single death has occurred, and the patients generally have convalesced kindly and rapidly. On inquiring as to the condition of the surgical ward I find that during the months of January, February and March that there occurred seven cases of erysipelas; one of gangrene and extensive suppurations, five of extensive suppurating ulcers, one of peritonitis following an operation for stone, and one of pyæmia. Surely this condition of things was sufficient to account for the frightful mortality of three in thirty-seven cases in six weeks, or one in $12\frac{1}{3}$ cases of labour, or, taking the three months together, one in $17\frac{2}{3}$ labours. I ought to state here that the ward was soon after changed to the second story of another pavilion with a medical ward below, and now remains in that way.

DECEMBER 7TH, 1870.

Dr. GRAILY HEWITT, President, in the Chair.

Present—55 Fellows and 10 visitors.

The following gentlemen were elected Fellows of the Society: R. C. Appleton, M.R.C.S., Beverley; Wm. C. Grigg, M.D.; Freeman Izod, M.R.C.S., Tottenham; and W. Summerhayes, M.R.C.S., Ealing.

Dr. LLOYD ROBERTS (Manchester) showed three drawings, two of which were of cases of spina bifida, the third of a case of extroversion of the bladder. Both cases of spina bifida were treated by passing a seton through the tumour. In one case, sent to St. Mary's Hospital by Mr. Palanque, surgeon, the spina bifida was situate at the lower portion of the dorsal and upper portion of the lumbar vertebræ, was about the size of a pineapple, and operated upon July 25th, 1870 —the child being seven months old—by passing a seton of silk thread through the base of the tumour, and tying both ends. Serum flowed freely through the openings made by the needle, and by the side of the ligature. In a few hours the child became convulsed and died on the evening of the next day. On opening the sac twenty-four hours after death it was found to be filled with pus. Intersecting the sac were eighteen or twenty nerve-filaments, compression of which doubtless produced the convulsions. The second case occurred September 21st, 1870, in the practice of Mr. Riley, surgeon, who requested Dr. Roberts to see the case with him. The tumour was situate in the sacral region,

and was of the size of a small melon. Mr. Riley punctured it on the day of its birth; serum flowed freely through the small canula which had been introduced. On the 25th of September (the day Dr. Roberts saw the case) Mr. Riley passed a worsted seton through it. In a day or two the

tumour was very much reduced in size, pus passing through the small openings by the side of the ligatures, which has continued ever since. The tumour is now almost gone, but seems to be painful; child does not thrive but sleeps, and takes the breast well; when three days old he had a convulsive seizure. The third case was one of extroversion of

the bladder in a female child born 10th April, 1870, and died August 2nd, 1870. The position of the ureters was well marked by the constant welling up of drops of urine; occasionally the urine would cease to pass for a minute

or so and then a distinct and vigorous stream would appear for a few seconds, thus showing some contractile power in the vesical orifices of the ureter or that the bladder must have contracted, and so closed up the extremities of the ureter. The post-mortem showed that the left kidney

was normal in size; the right one third larger than the left, two ureters proceeded from the right kidney which joined to form a single duct at the bifurcation of the aorta. The left ureter was normal.

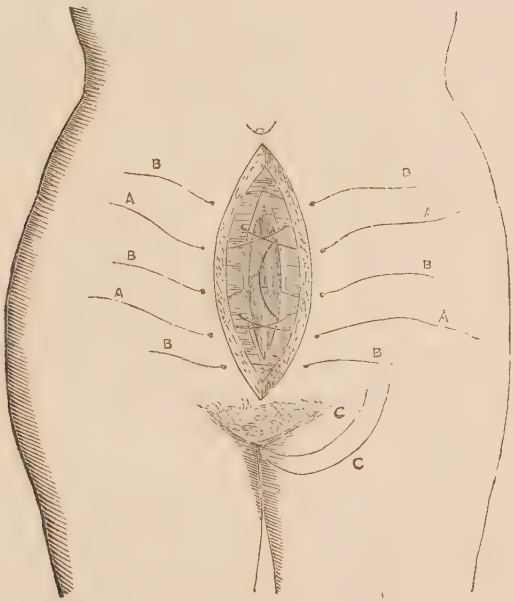
DESCRIPTION OF A SUTURE FOR CLOSING THE UTERINE WOUND IN CÆSAREAN SECTION, AND FOR UNITING THE UTERINE WOUND TO THE ABDOMINAL WALL.

By Robert Barnes, M.D.

The tendency to gaping of the uterine wound after the Cæsarian section, and hence the liability to effusion and secondary hæmorrhage and peritonitis, are now recognised as reasons for closing the uterine wound, and for bringing the uterus into proximity with the abdominal wall. Uterine suture should meet the following conditions: 1st, it should stop the hæmorrhage from the cut surfaces of the uterus; 2nd, it should secure fair apposition of the two lips of the uterine wound; 3rd, it should keep the anterior wall of the uterus in apposition with the abdominal wall so as to favour adhesion without causing dragging; 4th, it should admit of the easy removal of the sutures when they have done their duty.

I have designed a method of suture which I believe will answer all these indications. The needle armed with fine silver wire is carried perpendicularly through the uterine wall about half an inch from the edge of the wound near the upper angle, so as to transfix the wall above any bleeding sinuses. The wire is then carried through the same lip back from within outwards below the sinuses. This leaves a loop on the internal aspect. The effect of this when the two ends are pulled upon, is to compress the sinuses after

the manner somewhat of Simpson's acupressure. Next, the opposite side of the wound is pierced on the same level. This suture is made to pass through the loop of the first suture before piercing the lower part of the wound to bring it out. There will now be two loops of wire which intertwine on the inner aspect of the uterus, and the four ends come out on the outer aspect to be carried presently through the abdominal walls. Before proceeding to this



A A. Utero-abdominal sutures.
B B. Abdominal sutures.
C C. Clue-line to utero-abdominal sutures.

step it is necessary first to pass the loop of a silver wire over the crossing of the loops of the uterine sutures, and to carry the ends down through the os uteri and out by the vagina. This can easily be done by means of an eyed probe. The object of this is to keep a hold upon the sutures with a view to their subsequent removal. The union of the uterine wound

to the abdominal wound may now be effected. The four ends of the uterine sutures are now carried by needles through the abdominal walls, crossing each other, *i. e.*, the two ends emerging from the right side of the uterine wound are taken to the left side of the abdominal wound. The effect of this is that when the sutures are drawn upon and secured by twisting outside the abdomen, not only is the uterine wound drawn up close against the inner abdominal wall, but the uterine wound also is closed. To obviate the subsequent dragging from shrinking of the uterus, it is better to pass the uterine sutures through the abdominal wall at a lower level, that is, nearer the pubes than where they emerge from the uterus.

The proper abdominal sutures are then adjusted, and when all are *in sitû*, they can be drawn tight and closed. To remove the utero-abdominal sutures, which may be done on the seventh or eighth day, get an assistant to draw gently upon the clue-line brought from the vagina, whilst a finger of the left hand follows it up to its connection with the intra-uterine loops, which can then be divided by scissors worked by the right hand. The sutures can then be withdrawn by gentle traction upon the ends which rest upon the abdominal surface.

Dr. J. Braxton Hicks thought that the plan of Dr. Barnes was very ingenious, and probably would be found better than the mode of withdrawing the suture from the exterior. He (Dr. Hicks) had been the first to recommend the plan and also to put it in practice in a case described before the Society. Since that it had been advocated in France. So far as his case showed the plan appeared satisfactory, for although there was no severe vomiting, the contents of the uterus were not extruded into the peritoneal cavity.

REPORT ON DR. HALL DAVIS'S SPECIMEN OF EXTRA-UTERINE GESTATION, SHOWN AT NOVEMBER MEETING.

THE fœtal cyst was strongly attached to the left and posterior surface of the uterus, and with the anterior surface of several inches of descending and sigmoid colon. The cyst had an investment of peritoneum, and the extremity of the left broad ligament projected at its left border. A channel, apparently continuous from the uterine extremity of the Fallopian tube, could be traced upon the front and upper aspect of the cyst for about three inches but no further; at a more distant part of the exterior of the cyst, towards its left and upper and posterior aspect, projections of fimbriæ could be seen. On examination of the lining tissue of the supposed continuation of the left Fallopian tube no epithelium could be detected, hence most probably this was not in reality the continuation of the tube.

The interior of the ruptured cyst was lined with amnion, and this with the subjacent tissue was elevated in three situations by large hæmatoceles, one of these being in the situation of the placenta.

The placenta was thin and proportionally extended; its cord was of the size proper for an eighth month's fœtus. Thin sections were made through the walling of the cyst at opposite sides of it with a Valentine's knife, and examined microscopically by Dr. Cayley, Lecturer on Histology and Pathological Anatomy at the Middlesex Hospital, when abundance of smooth unstriped muscular fibres like those of the uterus and Fallopian tubes became at once apparent. This appearance, coupled with the ascertained absence of the left ovary, led to the inference that the above cyst was tubal ovarian, being developed from the left ovary and left Fallopian tube. The right ovary was normal, but the right Fallopian tube contained a small collection of atheromatous

deposit. The uterus exhibited considerable development of its muscular wall, but had not been pregnant.

(Signed) ROBERT BARNES.
J. HALL DAVIS.

A CASE OF EXHAUSTION AND CONVULSIONS ARISING FROM PROTRACTED LABOUR OF MORE THAN SIX DAYS' DURATION; CRANIOTOMY; RECOVERY.

By J. T. MITCHELL, F.R.C.S.

A MORE deeply interesting and important case than the following, considered in its practical bearings and consequent instruction, has, perhaps, never been brought before the meetings of this Society.

On the 3rd July last, at about six o'clock, I was summoned to a patient, and on the way I learnt from the husband, who fetched me, that his wife had been in labour since the previous Monday (during more than six days); that during the whole of that time she had continually suffered very severe pains, which had only subsided from time to time in degree, until about seven o'clock in the morning of that day. Since which she had been in violent continuous labour, a duration of ten hours.

On arriving at the bedside and proceeding to examine per vaginam I found a prolonged scalp filling up the whole of that passage into which it had been tightly thrust by prolonged and violent uterine action, and it was distended with a large amount of fluid. The os uteri had perfectly receded, and consequently it could not be felt, as also was the case with the bones of the child's head and the sutures. On placing my hand in the hypogastric region I distinctly

felt a clearly defined largely distended bladder, and I learnt from the nurse that she had not passed her urine, from early in the morning, that she had lain on the bed as I saw her since seven o'clock in the morning (then about six at night), and that the catheter had not been used. I then at once introduced the catheter and emptied the bladder, after which I had no difficulty in introducing the forceps, which locked easily, but in attempting to approach the handles I found that the blades were embracing a very large head, and in attempting to draw it down I found the impediment to be complete. Of course, by this time, I plainly perceived that I was encountering an hydrocephalic head, and that nothing would deliver it but perforation and extraction with the cranioclasp, which after consultation with the husband and her own medical attendant I proceeded to accomplish, and delivered her of an extensively diseased fœtus, equal to, if not above, the normal size, at full nine months' gestation, which, beside having an enormous hydrocephalic head, had the very largest spina bifida on the lumbar vertebræ that I ever saw, being of the size of a very large orange. It had also deficient spinous processes on many of the lumbar vertebræ, and distorted lower extremities. After the child was born the uterus continued its contraction, and soon the placenta was expelled with no after hæmorrhage. The patient now, for the first time after I had entered the room, moved to a slight extent her arms and legs, showing marks of gradually returning sensibility.

Her ultimate recovery was complete.

I have omitted to state that the age of the lady was 33 years; that this was her third confinement; that her first child, now between four and five years old, is a healthy girl; that her second child was born with "deficiency of lumbar vertebræ," which I suppose means "spina bifida" which lived only three days.

The foregoing recited case shows the very sad conse-

quences liable to be the result of allowing a protracted condition of labour to proceed without ascertaining the cause of obstruction to its progress, and of deferring to apply the appropriate remedy either by the attendant accoucheur or by some other competent practitioner called in to advise and act in the matter long before so dreadful a crisis had arisen, as perfect exhaustion, convulsions, and approaching death.

CASE OF PELVIC CELLULITIS, NOTED WITH SPECIAL REFERENCE TO THE TEMPERATURE.

By Charles J. Cullingworth, M.R.C.S., Manchester.

(Communicated by Dr. Lloyd Roberts.)

Having recently had an opportunity of watching and carefully noting a case of puerperal pelvic cellulitis from its commencement throughout, I have thought that it might be useful to place on record an account of the thermometric observations. Accordingly I now venture to submit to your notice a very brief history of the case, condensed from my notes, and a tabular statement of the temperature and pulse arranged side by side. The chart of the morning and evening observations is drawn up from the table, and only extends to the end of the third week, as after that time the observations were for the most part made in the morning only.

E. C—, æt. 24, married, was confined of her first child at 5.20 a.m. on the 4th of January, 1870. The labour was easy and natural, and all went on well until the evening of the 5th, when the patient experienced a sensation as if water were being poured down her back, and immediately afterwards she had a "shivering fit." This was succeeded

by others during the night and following day. She continued feverish but without local symptoms until the morning of the 8th of January (the fourth day), when some ill-defined fulness and tenderness became evident in the left iliac region.

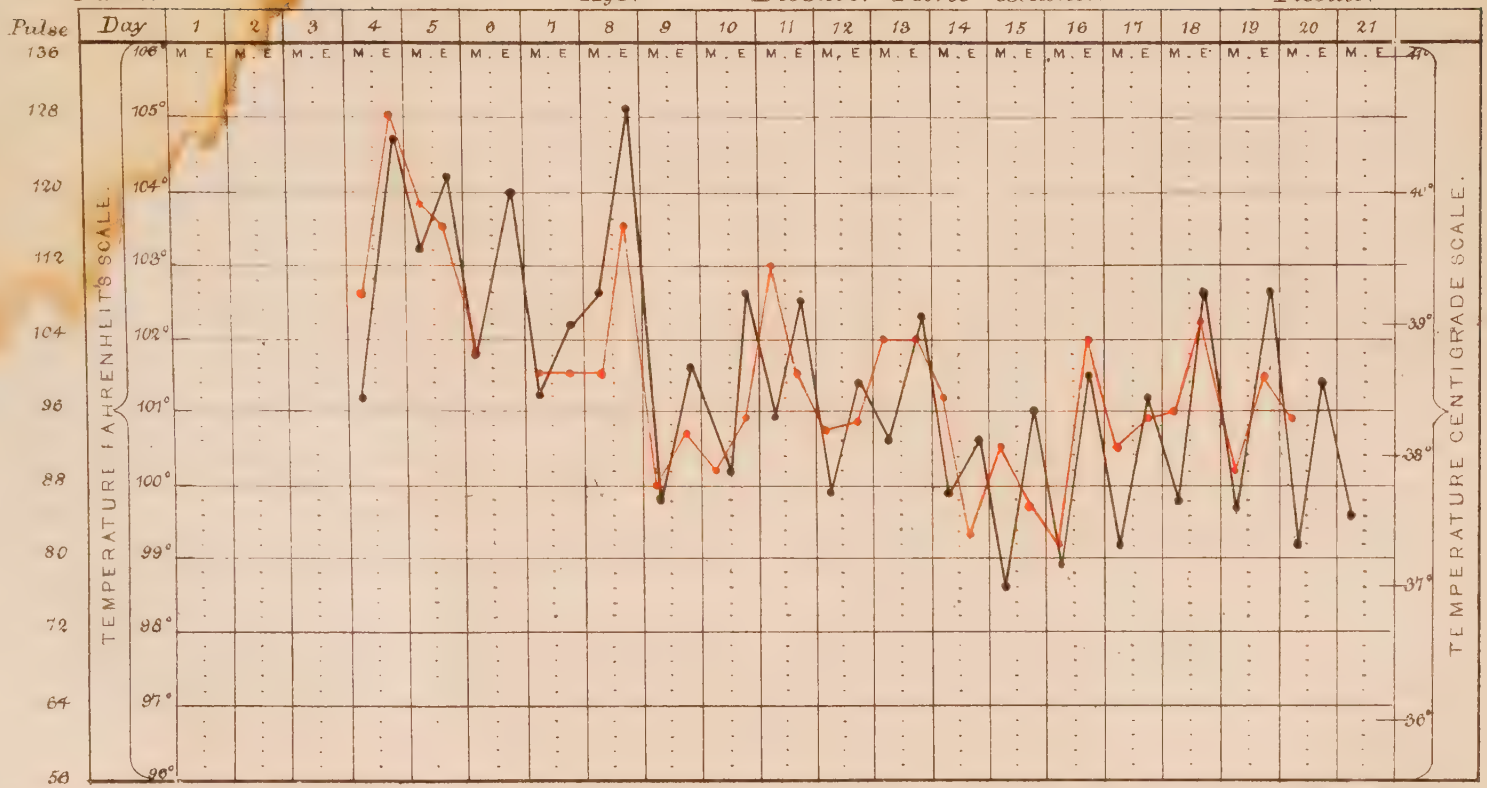
On the 12th of January (the eighth day) she began to complain of "bearing-down" in the vagina and rectum, with occasional darting and stabbing pains and constant tenesmus, which symptoms were persistent. It was not, however, until the 5th of February (a month after the first rigor), that any *constant* pain was felt in the left iliac region, and on the 10th of the same month symptoms of general peritonitis supervened, lasting for a fortnight, and completely masking during that time the iliac fulness and sense of resistance.

From the 16th of February to the 8th of March there was no action of the bowels beyond the passing of two or three small hard lumps once or twice after repeated enemata, and hæmorrhoids became a source of much distress. Micturition increased from day to day in frequency and difficulty.

At 2 a.m. on the 7th of March (not quite nine weeks from the commencement of the attack) a little thick ropy inoffensive pus was passed along with one or two small hard lumps of fæces. A little pus continued to drain from the anus, until at 6 a.m. five or six more lumps passed with more pus. These evacuations were accompanied with a sense of bearing down, which the patient described as all but intolerable. At 7 p.m. on the same day it is noted that "no more scybala have been seen. Three or four ounces of thick greenish-yellow ropy pus have passed during the day. No dulness, tenderness, or feeling of resistance can be detected in the left iliac region; and indeed both sides of the abdomen will now bear pressure equally well, and are equally soft and yielding. All sensation of bearing down and frequency and difficulty of micturition have gone." On the following day an immense quantity of solid fæces was

spontaneously evacuated along with more pus. A small quantity of matter continued to pass away daily up to the 11th of March, and after that date not a trace was to be seen. The discharge lasted therefore for five days, and then the patient rapidly regained her usual health.

CLINICAL CHART OF TEMPERATURE.&c.



W West & C° Lith

Date.	Temperature in axilla.	Pulse.	Bowels. How often moved.	Bowels. If after enema or naturally.	Bowels. Character of stool.	Additional notes.
1870.	Fahrenheit.					
Jan. 7,	...	100	Once	After Castor oil	...	
8, M.	101·2	109	None	...	...	The evening records up to Jan. 12 were taken at 6.30 p.m., afterwards at 9.30 p.m.
E.	104·7	128				
9, M.	103·2	118	None	...	...	Temp. at 12.30 p.m. 102·8.
E.	104·2	116				Temp. at 9.30 p.m. 103·8.
10, M.	101·8	102	Once	Naturally	...	Temp. at 1 p.m. 102·4.
E.	104·0	...				
11, M.	101·2	100	Once	Enema	Offensive.	Temp. at 9.30 p.m. 102·0.
E.	102·2	100				
12, M.	102·6	100	None	...	...	Temp. at 9.30 p.m. 104·3.
E.	105·1	116				
13, M.	99·8	88	Once	Enema	...	Temp. at 6.30 p.m. 101·2.
E.	101·6	94				
14, M.	100·2	90	Once	Naturally	...	Temp. at 6.30 p.m. 101·7.
E.	102·6	95				
15, M.	100·9	112	Once	Enema	Copious	Temp. at 6.15 p.m. 101·2.
E.	102·5	100				
16, M.	99·9	94	None	...	...	
E.	101·4	95				
17, M.	100·6	104	Once	Enema	Solid.	
E.	102·3	104				
18, M.	99·9	98	None	...	...	The night sweats, which had been present from the first, ceased this day.
E.	100·6	83				

Date.		Temperature in axilla.	Pulse.	Bowels. How often moved.	Bowels. If after enema or naturally.	Bowels. Character of stool.	Additional notes.
1870.		Fahrenheit.					
Jan. 19,	M.	98·6	92	Once	Enema	...	
	E.	101·0	86				
20,	M.	98·9	82	Once	Naturally		
	E.	101·5	104				
21,	M.	99·2	92	Once	Naturally	...	
	E.	101·2	95				
22,	M.	99·8	96	Once	Enema	...	
	E.	102·6	106				
23,	M.	99·7	90	Once	Naturally	Slight.	
	E.	102·6	100				
24,	M.	99·2	95	Once	Enema	..	
	E.	101·6	...				
25		99·6	100	None	...	...	
26		98·9	95	Once	Enema	...	
27		...	94	...	...	...	
31		100·0	100	Frequently with griping	...	Dark and watery.	
Feb. 1		100·2	98	None	...	...	
2		100·2	86	None	...	...	
3		99·7	86	Once	Enema	...	
4		100·3	...	None	...	...	
5		100·3	88	Once	Naturally	...	
6		99·6	...	Once	After Pil. Rhei co.	...	
7		100·4	...	Once	,,	...	
8		100·6	...	Once	,,	...	
9		100·4	96	None	...	...	
10		99·8	106	Several	After Pil. Rhei co.	...	

13	100·0	108	Once	Enema	...	
14	100·0	100	None	...	...	
15	99·8	88	None	...	...	
16	...	...	Once	Enema	...	
22	...	...	Once	Enema	Very slight.	
25	...	108	None	...	...	
27	102·4	120	Once	Enemata	Slight and lumpy	Countenance pinched and very pale.
28, M.	100·8	110	None	...	...	Look of anxiety gone; pain like "knives" in lower part of belly and rectum.
E.	102·4	...				
Mar. 1	100·7	102	None	...	...	
2	...	100	None	Enemata	...	
3 & 4	...	...	A few scybala removed.			
6	...	98	No further action since 4th.			
7, M.	...	...	Twice	Naturally	Scybala and pus.	
E.	98·6	90				
8, M.	...	...	Once	,,	Solid with pus.	
E.	...	80	Twice	,,	,,	
9, M.	...	72	Several	,,	Dysenteric, with pus and very little stool.	
E.	98·5	...	None	After starch and opium enema	...	
10	...	78	None	...	Pus only.	
11	...	...	None	...	Very little pus only.	
12	...	...	Once	After ½ oz. Castor oil and an enema	Slight and solid without pus.	
13	...	96	Once	Naturally	Copious and solid, no pus.	
14	...	...	Once	Enema	Very slight indeed.	
19	98·8	80	Bowels very costive.			
24	...	84	Bowels act twice daily after taking each night an ounce of Dec. Aloes co.			

FIBRO-ENCHONDROMATOUS TUMOUR COMPLICATING PREGNANCY. SAFE DELIVERY. WITH REMARKS.

By Alfred Wiltshire, M.D., M.R.C.P. Lond.,

JUNIOR PHYSICIAN TO THE WEST LONDON HOSPITAL; PHYSICIAN TO THE SAMARITAN HOSPITAL FOR WOMEN AND CHILDREN; PHYSICIAN TO THE BRITISH LYING-IN HOSPITAL; LATE MEDICAL INSPECTOR TO H.M. PRIVY COUNCIL.

The case about to be narrated presents points of interest as well for the general as for the obstetric physician. The chief points are, to state them in the order of their appearance, *firstly*, the tumour, in itself of considerable interest owing to its position and comparative rarity; *secondly*, the missing of two catamenial periods for the first time in the patient's life—a matter of special interest from a diagnostic point of view, as will be shown hereafter; *thirdly*, the complication of pregnancy by the tumour; *fourthly*, the thermometric record, which exhibits a typical example of the normal thermometrics of the puerperal state; *fifthly* and lastly, the fact that, although the child of which the patient was delivered proved to be the subject of intense congenital syphilis (of which it subsequently died), the mother at no time presented the smallest evidence of that disease in any way whatever.

I am indebted for the patient to Dr. Druitt, who kindly sent her to me before he left town for his trip to the Continent in the spring of the present year (1870). Dr. Druitt also kindly gave me an account of the case, and I had the advantage of his great experience and skill up to the time he left for the Continent.

Dr. Druitt's account was substantially as follows:—A Mrs. G—, æt. 35, whom he had from time to time attended, consulted him about a tumour which was growing in her abdomen. Dr. Druitt ascertained that there was a tumour apparently springing from the right ilium, which projected into the abdominal cavity. It was so hard that he

regarded it as enchondromatous. Mrs. G— was also pregnant, and she believed herself to be nearly seven months gone.

Dr. Druitt suggested that probably it would be well to induce labour at the seventh month, so as to avoid any interference on the part of the tumour with the descent of the child, which he thought might at full term be so large as to increase the difficulty and danger of delivery; but with characteristic kindness and consideration he was so good as to say he would leave the decision as to the course to be adopted entirely to myself. Dr. Druitt mentioned that he had found a somewhat curious condition of the cervix uteri when he examined his patient: it was elongated, of small diameter, flexible, like that of an empty uterus, not in the condition therefore to be expected for a woman so far advanced in pregnancy as Mrs. G— was supposed to be, viz., about seven months. There appeared in fact to be a little doubt as to whether or no the patient was actually pregnant at the time of his first examination. Having learnt the foregoing facts, I visited Mrs. G— on the 19th of February, and noted the following condition. Mrs. G— is an unusually healthy and vigorous-looking woman; her general health is as it has always been, very good. She is ruddy and well nourished. She looks about seven months gone with child.

She was confined of her first child in October, 1864. She had a normal labour, and the child of which she was then delivered is now a fine healthy little girl.

Three months after her first confinement she noticed a very hard swelling, about the size of an egg, a little anterior to and within the crest of the right ilium. The tumour was not at all movable. A month after this discovery, that is, about February or March, 1865, she consulted a gentleman who, although the tumour was then only about the size of an egg as above described, insisted, so the patient says, that she was pregnant. He said nothing about the tumour.

The mass continued to grow until 1867, when it was about the size of a "pint basin." Meanwhile she had

become pregnant, and was prematurely delivered on the 17th May, 1867, owing to a fright. The patient says that the gentleman who attended her discovered the tumour while removing the placenta, which was adherent. The tumour had steadily continued growing.

On examining the abdomen it was seen that its shape was not quite that of normal pregnancy, for on the right side there was an irregular tumour which pushed the uterine tumour somewhat over to the left. On palpation and percussion I found the irregular tumour to be hard, but my impression was that it was not pure enchondroma, but fibro-enchondromatous. It was not tender. It was lobulated, two chief masses being easily distinguishable. It sprang apparently from the crest of the right ilium on its inner aspect, and from the fascia between that bone and the lower ribs. It reached backwards almost to the thick muscles of the back, and projected forwards to about the nipple line. Above it was quite separate from the liver, an isthmus of resonance being clearly made out between the two; below it descended as far as Poupart's ligament, but it did not project into the lower cavity of the pelvis. It was but very slightly if at all movable.

Apart from this hard, irregular tumour was the gravid uterus, inclining somewhat towards the left. Fœtal movements were readily detected, though they were not very strong. Per vaginam it was found that the fœtal head was well down, and that it was in apposition with the lower segment of the uterus, the cervical portion of which was quite unfolded.

On inquiry I found that Mrs. G— had menstruated last on the 6th of May, 1869. She said that ever since the catamenia had first appeared, at the age of fourteen and a half, she had menstruated with the most perfect regularity, the menses appearing in the morning about 8 o'clock, and never varying half an hour. She said that, except when pregnant or suckling, she had never missed a period or even had it delayed. On these grounds I ventured to think that probably the pregnancy had advanced to the eighth month;

and further, that whatever might be the duration of the pregnancy the induction of premature labour was not urgently called for, seeing that the head of the fœtus was well below the tumour, which, as far as I could make out, did not project into the pelvic cavity, and therefore was not likely to interfere with the descent of the fœtus.

I saw Dr. Druitt and communicated to him my views of the case, in which I may be pardoned for saying he quite coincided. Shortly after this, on March 1st, I again saw Mrs. G—, and found the condition of the cervix uteri to be quite different from what it was at the previous examination. Now it was conical in shape, and an inch or more in length, soft and yielding, but not opened out as before. A few days after this, in this same month of March, about the 8th, I received a message from Mrs. G—, saying she was in labour. I accordingly visited her, and found that she had had pains recurring at intervals throughout the day. On vaginal examination I found the state of things to be very much the same as before, and I told her I did not think she could be in labour, although according to calculation dating from the last menstrual period she had arrived at the full term of pregnancy. The pains soon subsided, and Mrs. G— went on for several weeks as usual, being seen by me from time to time, both she and I wondering why she was not confined.

It was not until 8 o'clock in the morning of the 16th of May, 1870, twelve months and ten days after the last appearance of the catamenia, that labour set in. When I arrived the waters had escaped and labour was in active progress. Pains recurred every three or four minutes, and a fine female child was speedily born. The head presented naturally (first position of Naegelé). The placenta followed in a minute or two, and a perfectly natural labour was completed.

I refrained from manipulating the abdomen with a view to ascertaining the exact relations of the tumour, as one might so readily have done immediately after delivery, as I was anxious not to set up any irritation by so doing, pre-

ferring to wait until some weeks had elapsed; but I could easily make out, directly after delivery and before applying the binder, that the tumour had not altered its position much, not at all in fact, or not appreciably so.

I directed that the patient should be well fed, and determined that unless specially called for she should have no medicines.

I would here call attention to the following observations on the temperature of the patient, concerning which I would remark, first, that they are a type of the normal temperature in the puerperal state; and, secondly, that although I prefer, as a rule, taking the temperature in the mouth, I chose the axilla in this instance so as to avoid the smallest chance of exciting the patient in any way.

At 10.15 on the evening of the confinement, May 16th, I found the patient's temperature to be 99° F.; pulse 96.

At 12.45 p.m. on the 17th temp. $98\frac{4}{5}$° F.; pulse 92; had passed water freely and was going on admirably in every respect.

On the 18th temp. 99° F.; pulse 104; milk coming in breasts.

On the 19th temp. 103° F.; pulse 120; bowels not open, although she had taken an aperient; urine thick; tongue whitish; thirsty.

On the 20th temp. 102·2° F.; pulse 120; lactation established.

On the 21st temp. $98\frac{2}{5}$° F.; pulse 98.
,, 23rd ,, $98\frac{2}{5}$° F.; ,, 88.
,, 26th ,, $98\frac{1}{5}$° F.; ,, 92.
,, 28th ,, $98\frac{2}{5}$° F.; ,, 92.

During this time the patient went on admirably, and there was not a symptom, with the exception of the high temperature and the rapid pulse on the 19th and 20th, to occasion the slightest anxiety; and those which might, in one unaccustomed to make thermometric observations, have caused some uneasiness, viz., the high temperature and quickened pulse, did not cause me any anxiety, for I regarded them as evidence of the setting in of lactation, and

in the absence of any discomfort whatever on the part of the patient, who all through the affair was calm and placid, I did not regard them as of serious import.

The child was an uncommonly fine and healthy-looking little girl. She appeared to be the very type of a healthy baby and so remained for exactly a fortnight after birth, when her mother noticed a spot on the child's forehead, which she said was "red and shiny." Gradually other similar spots appeared on the face, forehead, neck, and feet. When I saw the child, on June 8th, three weeks and two days after its birth, there were no spots on any part of the trunk, and only one in addition to those already mentioned, and that was on the left wrist. Some of the spots were encrusted with a greenish-yellow covering, other spots were smooth and shiny. The child snuffled a good deal. Mrs. G— assured me that she had never at any time been the subject of abnormal discharges from the genital organs, nor had she had sores, eruption on the skin, sore throat, or lost her hair.

Mrs. G—'s last child was born on the 17th May, 1867. This labour was brought on by fright and the child was born dead, having been dead it is supposed three weeks; in other words, death was occasioned by the fright, and upon this point Mrs. G— is very positive, as she says the child never moved after the fright, when it appeared to completely turn over. This child was in no way spotted, but the nurse said that the skin was just beginning to peel from its buttocks. Mrs. G— had never had any miscarriages.

The present child was seen by Dr. Druitt, who had meanwhile returned to town, and he confirmed absolutely the diagnosis of congenital syphilis. Dr. Druitt took charge of the patient and treated the infant with mercurial ointment, &c., but it died at the age of seven weeks, on July 6th, 1870.

Remarks.—This case at the onset, before a vaginal examination was made, appeared to be a formidable one, but that method of investigation at once assured me that,

unless a very rapid extension of the growth into the pelvis occurred, no apprehension need be entertained of an unfavorable issue, and I grounded my belief on the fact (in such cases a most important one) that the fœtal head was well below the tumour, and had, so to speak, precedence of the intruder. Another important element in the prognosis consisted in the fact that the tumour was of too hard a nature to be burst or otherwise seriously injured by the expulsive efforts of the patient during labour, and so no danger need be apprehended as in ovarian or other cystic tumours of the abdomen. I am aware that loculi of considerable size containing fluid may be present in enchondromatous tumours, some originating in cystic degeneration, others being part of the original growth; but ample evidence of this condition is usually afforded by palpation, and such signs were wanting in the present case. Having excluded, therefore, danger from injury to the tumour during labour, and the probability of mechanical impediment to the descent of the fœtal head, I felt justified in recommending that pregnancy should be allowed to go to its full term, and the result, I am fain to believe, fully ratified the wisdom of the decision. If it has not already been done I would venture to lay it down as a rule in obstetrics, that when the fœtal head is well below a *solid non-cystic* tumour of the upper part of the pelvis or abdomen the induction of premature delivery is not (*cæteris paribus*) called for; provided always that the tumour be not a rapidly growing one. This may appear to be, as doubtless it is, a commonplace and obvious deduction, but it is just such points as these that should be borne in mind, and I trust I may be pardoned for insisting upon it. Enchondromatous tumours are comparatively rare, but when they do occur they not unseldom invade the pelvis, and it is interesting to remark in connection with the case before us that when they attack the pelvic bones they commonly spring from the neighbourhood of the sacro-iliac synchondrosis; the region affected in this instance.

Sir William Jenner has recorded an important case in a

lecture published in the 'British Medical Journal' of January 1st, 1870. A widow, æt. 36, who had borne seven children, had a very large enchondromatous tumour springing from the region of the right sacro-iliac synchondrosis. A portion of the tumour descended into the pelvis. In this case there were cysts which in the event of labour might have burst internally.

Mr. Paget mentions the case of a woman, æt. 34, in whom a similar tumour, also springing from the neighbourhood of the sacro-iliac symphysis, projected into the vagina and there underwent cystiform change. He also mentions three or four other instances of enchondromatous tumours growing from this region; but they occurred in males.

How cysts arise in these hard tumours is a question of great pathological interest. Mr. Paget ('Surg. Path.') says that the larger the tumour the more likely is it to undergo softness and liquefaction, owing to the hindrance to the penetration of blood to its central parts. But he remarks that it may be due to exposure of the tumour, as in the instance mentioned above, when a portion of the tumour projected into the vagina of a woman. Still, according to the same distinguished surgeon, in many cases we are unable to assign a reason for such softness.

Sir William Jenner is "inclined to the opinion that in some cases at least the fluid is formed from the first, and is formed at once fluid, and not by solid softening down;" and he supports this opinion by two arguments deducible from the very interesting case I have already alluded to; first, there was no olein, or next to none, in fluid removed from some of the cysts by tapping; and, secondly, the fluid reformed.

I make mention of this subject, though apparently only of pathological interest, because I believe it to have practical bearings which should be borne in mind by the obstetrician. Thus the propriety or expediency of tapping the cystic portion of an enchondromatous tumour per vaginam may, as it did in Sir Wm. Jenner's case (though not for

obstetrical reasons), become a question of considerable importance. As the contents of the loculi of enchondromas are generally very thick and tenacious, jelly like, or colloid in fact, in many instances, it is obvious that a small opening would be disappointing; and it would be advisable not to use a canula unless of large bore. Of course it is not to be understood that I deprecate the use of exploratory punctures by means of an exhausting needle or otherwise, I only wish to caution my confrères against accepting the evidence obtained in that manner as conclusive when only negative results are obtained.

The patient, for the first time in her life, missed two catamenial periods immediately preceding the time she conceived. This might have misled one seriously. Suppose, for instance, one had determined to induce premature labour. One would have been fully justified, by the exceptionally clear menstrual history, in assuming the duration of the pregnancy to have been, at the time I first saw the patient, eight months, and at the time Dr. Druitt saw her, seven months. In either case the result would have been deplorable. Happily, for the reasons already stated, I elected to allow the pregnancy to run its full course.

The complication of the pregnancy by the tumour did not render diagnosis very difficult; although, of course, it introduced elements of anxiety, both as to prognosis and treatment. How they were met has already been related.

The thermometric observations may be taken as a type of the normal thermometrics of the puerperal state. The rise in temperature on the advent of lactation, the maintenance of it during the establishment, and the fall on the completion of the process are clearly indicated.

The last point I would touch upon is one of very considerable interest and practical importance, clinically, pathologically, and physiologically.

I have stated that although the mother was in the bloom of health her child died of congenital syphilis. I am aware that this is not an exceptional case in this respect, for I

have met with other instances, but never, so far as I can remember, with one so thoroughly reliable and strongly pronounced.

This raises a crowd of important questions, of which the exact relation between the mother and the fœtus is the chief. The mode whereby the effete products of the latter are got rid of; the influence of pulmonary respiration and independent existence upon the development of the syphilitic poison (by bringing into greater activity the glandular system, the part mostly affected by the poison); the *modus operandi* of medicines administered to the mother during the pregnant state, &c., are subsidiary, but still important questions into which I cannot now enter.

My aim in producing this paper has been to place on record a case which I hoped might prove interesting and perhaps instructive: for myself I may say that I have found it replete with both, and I would fain hope that I have not missed the mark I presumed to aim at.

Dr. Martyn believed that a high temperature and quick pulse setting in about the third day pointed rather to puerperal fever than lactation, and that such a condition mostly depended on offensive lochia. A turgid state of the mammæ might cause some degree of fever, but when the temperature and pulse rose in the degree mentioned by Dr. Wiltshire, it was due to contamination from offensive discharges; such fever might subside quickly, but the injection into the vagina of some disinfectant was the best means to ensure this result. He (Dr. Martyn) had endeavoured to show in a paper read at the last meeting in reference to lactation that the fever met with on about the third day of childbed, so commonly called milk fever, was always associated with offensive lochia, and that the fever depends upon contamination from this source, and was not due to lactation.

Dr. Routh thought that Dr. Wiltshire in his very interesting paper had given an unusual example of fibroid disease. He would be curious to know if the fibroid tumour had enlarged *pari passu* with the uterus. Where the fibroid was in the uterus itself, whether external or parietal, it had been remarked that the tumour from the impetus of pregnancy enlarged also, and after delivery again diminished in size, sometimes becoming smaller than before. His own experience was, however, that in such cases

generally about the third or fourth month miscarriage occurred, owing to the interference by the tumour with the due development of the uterine organ. Dr. Wiltshire's case was interesting as proving that, even with so large a tumour, gestation had gone to its full period. This must, however, have been due to its position. 2. In regard to the non-presence of syphilis in the mother, although the child and father were affected, Dr. Routh believed this woman might have had *uterine* syphilis, and so it had escaped observation. Indeed, this variety of syphilis was often overlooked, and more than this, when observed, the induration of the cervix was often called carcinomatous. Had this woman been examined for uterine syphilis? The fact of her showing no secondary symptoms might be due to her strong health. It was known that syphilitic eruptions, and other syphilitic symptoms, often did not appear till the patient's health deteriorated. Then, as in carcinoma, a uterus, if affected, took a longer time to poison the system than did the vulvar portions when diseased. Until this case had been watched some time the non-existence of syphilis could not be assured. 3. He could not endorse Dr. Martyn's opinion that a pulse of 120 generally denoted incipient puerperal fever during the lactation exacerbation. He had often seen cases with great milk fever one day, and once the secretion was established all the symptoms subsided, and the pulse fell to 80, or even lower, the lochia carefully observed at the time giving no indication of smell, or anything abnormal.

Dr. Edis observed that he could endorse Dr. Wiltshire's statement as regards the increase in the frequency of the pulse at the time the milk was distending the mammæ. He had noticed that an initiatory rigor, an acceleration of the pulse, and an increase in temperature were by no means infrequent about the end of the second or commencement of the third day after parturition, not explained by any other complication, the pulse and temperature returning to their normal standard as soon as the secretion of milk was established.

Dr. Thomas Ballard said, in reference to the rise of temperature and quickened pulse in the puerperal state, he would repeat that which he said at the last meeting, viz. that the feverishness was mainly caused by the irritation which resulted from applying the child to the breast before the milk was secreted. His experience proved to him that there was usually no acceleration of pulse or rise of temperature if sixty hours elapsed after delivery before the child was put to the breast. In reference to the alleged syphilis in the infant, he wished to ask Dr. Wiltshire what were the symptoms which indicated that it was syphilitic; he had only mentioned some spots on the skin and some snuffling; there were no symptoms of syphilis in the mother, and the child was not cured by mercury. Dr. Ballard thought the indications

of infantile syphilis were rather vague, and he was desirous to know what were really the pathognomonic signs. He had been long searching for a specimen of infantile syphilis, but in vain.

Dr. WILTSHIRE, in replying, said that the child had inherited syphilis from its father. He agreed with Dr. Head that a frequent pulse should arrest the attention of the accoucheur, and if it persisted, and especially if very high, should lead to inquiry as to its cause. He regarded a temporary acceleration of the pulse, however, as of but little significance. He thought exaltation of the temperature on the third day was due to the establishment of lactation, and not to the state of the lochia about that time, since, if it were due to the latter cause, as Dr. Martyn thought, the temperature should remain high for a longer time than it did. In reply to Dr. Routh, Dr. Wiltshire said that the tumour was not in the uterus, but attached to the pelvic bones, and therefore could not be expected to undergo changes such as uterine fibroids often did after delivery. As the tumour did not extend into the lower pelvis, premature delivery was not called for. The mother had never shown the smallest evidence of syphilis, or even of depressed health, and until she did Dr. Wiltshire thought he would not be warranted in assuming that she was the subject of that disease. He thanked Dr. Edis for remarks corroborative of the statements made in the paper upon pulse and temperature, and added that a large number of thermometric observations had led him to the conclusion that the establishment of lactation caused a temporary rise in temperature to the extent of three or four degrees, and that independently of the application of the infant to the breast; he also referred to Mr. Squire's observations in the same direction. Dr. Wiltshire assured Dr. Ballard that the symptoms the child presented were those of congenital syphilis, viz. mucous tubercles, shining spots, snuffles, &c.

CONCLUDING REPORT OF INFANT MORTALITY COMMITTEE.

Dr. Graily Hewitt,—Gentlemen, it will be in the recollection of this Society that the Committee on Infant Mortality furnished a report, which was now upwards of a year ago. This report, prepared by Dr. Gervis, contained the results of a very extended inquiry conducted through the medium of Fellows of this Society into the causes and extent of infant mortality in England. In consequence of what was said at the reading of the report, and in consequence of facts and suggestions contained in the report itself, the Committee decided that it would be desirable to obtain certain supplemental information from localities whence none had then reached us. This has now been done, and we present to you this evening a supplemental report, drawn up also by Dr. Gervis, embodying facts of an additional character.

Further, also, we present to you other results of the work of the Infant Mortality Committee. It had been suggested that much of the mortality amongst infants resulted from ignorance as to the proper mode of bringing up children. The Committee set itself to work, therefore, to draw up a body of rules. Dr. Playfair, one of the members of the Committee, produced a draft of rules for this purpose, and this draft was carefully considered at several meetings of the Committee. Afterwards it was considered paragraph by paragraph by the Council of the Society. Further, the opinion of the honorary fellows of the Society was obtained. The document now presented to you, entitled "Rules for the General Management of Infants," is, therefore, the final result of much care and attention. It will now be published and distributed as widely as possible, and we believe that the rules, drawn up in the plainest possible language, will be useful in instructing all classes of the community how best to rear infants.

Another work has attracted the attention of the Committee, viz. the desirability of urging on the legislature the

necessity for various emendations in the laws relating to infanticide, and the regulation and registration of the practice of midwives. Mr. Curgenven, a member of the Committee, has especially given his attention to this matter, and he now presents to you the results of our deliberations on these subjects. It will be for the Society now to move further in the matter, and press these subjects on the serious attention of the governing bodies of this country.

The members of the Infant Mortality Committee included at first Dr. Hall Davis, Dr. Tyler Smith, Dr. Barnes, Dr. Meadows, Dr. Murray, and Dr. Gervis; subsequently Dr. Playfair, Mr. Curgenven, and myself were added to the number.

Finally, gentlemen, I trust that it will be considered that the Committee has done good service, and that the work of the Committee will have good results in preventing in some degree the great waste of infant life which has prevailed in so many parts of the country.

Report.

The Committee appointed by the Council to investigate the subject of infant mortality desire to bring before the Society their second and concluding report. It will be in the recollection of the Fellows that in the report of the Committee, read at the June meeting of last year, it was intimated that a further attempt would be made to obtain answers to the questions circulated from those Fellows who had not already replied, with the especial object of making the report complete for all districts of England and Wales; and the Committee have now the pleasure of stating that this object has been attained, and that they are in possession of information from every district and nearly every county. This information will now be brought before the Society, and afterwards certain practical recommendations founded upon the two reports and upon the various suggestions of

the Fellows. In the first report there was no reply from Wales; to the second circular five Fellows have responded. With respect to the proportion of births attended by medical men and midwives respectively, Mr. Evan Jones, of Aberdare, states that all the lower classes are attended by women, medical men being only called in in emergencies; Mr. Roberts, of Rhyl, puts the number at about one half; Mr. Morgan, of Llanelly, 80 p. c. by women; Dr. Jones, of Ruabon, 90 p. c. by women; and Dr. Gwynne Harries, of Pembroke Dock, more than a half by women. It may be concluded, therefore, that throughout the Principality, and more especially in the mining districts, the attendance of the lower classes is mainly in the hands of midwives, and of these every report states that they are in no degree instructed. On this subject Mr. Evan Jones writes, "the most pernicious practice among midwives here is that of delivering the women on their knees on the floor of the bedroom; much unnecessary hæmorrhage takes place, and consequently the recoveries are very tardy. It would be very desirable," he adds, "if something could be done to prevent midwives acting as nurses in fevers and other contagious diseases, and to prevent them from 'laying out dead bodies.' In nearly every case of puerperal fever that has come under my notice no medical man attended the confinements." The usual methods of attending to the child are adopted: butter and sugar appear to be universally given to it, and it is generally put to the breast without much delay. Dr. Harries and Mr. Jones, however, write that twenty-four hours often elapse before suckling is commenced. Lactation appears to be everywhere the rule, and is often continued through eighteen or twenty months; artificial food, chiefly of the farinaceous kind, being also given "irregularly," and "often in excessive quantities." To the question, Is the administration of spirits and cordials frequent? Mr. Jones writes, "Yes, for the first month or two." Mr. Roberts, "Too much so." Mr. Morgan, "Rather frequent." Dr. W. Jones, "Yes, by the lower class;" and Dr. Harries, "I think not." No particulars

of special interest have been furnished with respect to the early management of the infants. In fact, from Mr. Morgan's reply, "Irregularity in everything is the rule," it would seem that among the lower classes in Wales things are much the same as in this country. He adds "the children are usually encouraged to sleep as much as possible, and some people foolishly expose their infants with the idea of hardening them." To the third question Mr. Jones writes, "We have no baby-farming here, but when a child is not taken care of by the mother or grandmother the chances are it dies." Dr. Harris says, "Infants in the workhouse die to a great extent. Those put out by the Board of Guardians to nurse have a low death rate. There are no places where infants are taken care of by the day or hour." Dr. Jones, of Ruabon, writes, "Children here are well taken care of." The answers to the fourth question are all favorable. Neither desertion, ill-treatment, nor infanticide appear to be common. Dr. Harries says the only desertion is "by leaving children at the union gate, where they are at once taken in, and the mother punished. This practically clears her from further responsibility." The answers to the fifth question are incomplete. Mr. Morgan, writing from Llanelly, alone gives an average of the annual number of illegitimate births, which he puts on the authority of the local registrar at 5 p. c.; and Mr. Roberts, of Rhyl, states, on similar authority, that in his district, containing 27000 inhabitants, 29 illegitimate children were born in the year '61, or little more than 1 in 1000. With respect to the mortality of illegitimates Mr. Jones writes, I should say from 70 to 80 p. c. die within the year, and Dr. Jones, of Ruabon, says that of 80 illegitimate children known to live in the past five years, 23 lived over the year. On the subject of the last question Mr. Jones advocates the nursing of children by their mothers whenever practicable; when not so the use simply of diluted cow's milk; the avoidance of "dry sucking" by the removal of the bottle when empty; the restriction of feeding to proper intervals; warm clothing, and foundling hospitals.

Mr. Morgan suggests the importance of teaching mothers to take better care of their own health, and the improvement of the general sanitary condition of their dwellings. Dr. Jones advocates the creation of district foundling hospitals, and the prevention of interments without proper certificates; and Dr. Gwynne Harries also urges that no uncertified death should be registered, and that all illegitimate children should be visited once a quarter by the parish surgeon.

Passing now to the replies from our English Fellows. To the first question, no fresh information from villages has been received, but the statements of the first report, as to the other classes of towns, have been confirmed. Thus, in Alnwick, Reigate, and Gravesend, towns containing populations of 8000, 10,000, and 18,000, the returns are respectively 30 p. c. by women, very few by women, and less than 5 p. c. by women.

In two other towns, however, nearly as large, viz., Bideford, with a population of 5700, and Dorchester, with a population of 6800, the attendance by midwives is higher; in the first it is put at 75 p. c., and in the second at 65. But both of these towns partake of much of a strictly rural character. The return from Rochdale, on the other hand, entirely corroborates the opinion expressed as to the larger manufacturing towns, about 80 p. c. being attended by women. Lastly, Dr. Brunton, writing from the north district of London, puts the number attended by women as 30 p. c. All unite in stating that the midwives are uninstructed, except in the case of a few practising in London. To the question as to the mode of procedure with the infant, there is nothing in these replies to be added to the statement of the first report.

To the second question, with reference to the suckling and feeding of infants, the answers show that almost universally among the poorer classes lactation is unduly prolonged even to two years and upwards (Nottingham and Rochdale), but that from a very early period, the second or third month, much farinaceous and starchy food is given as

well, such as soaked bread and gruel, and not unfrequently the child is fed, "to quiet it," with the food of adults and uncooked vegetables (Alnwick). At Rochdale, Dr. March says that "among the millhands the first two or three children are generally quickly weaned, say in a month, and the child put out to nurse in the daytime, the mother taking it at night. But that when children become more numerous protracted nursing is the rule." With respect to the administration of spirits the answers are that it is not frequent, except those from Dr. Hatherley, Nottingham, and Dr. Brunton, London. From Dorchester, Dr. Aldridge writes, "Not so much resorted to as formerly."

The answers to the third section of Question II confirm the truth of the impression already obtained as to the great want of proper hygienic care, and the prevalence of insufficient ventilation and overcrowding. Dress is generally insufficient especially in the woollen elements, and with respect to washing Dr. March says "they are often unwashed for days together.

Question III has elicited no further information.

The answers to the fourth question uniformly assert that the desertion and intentional ill-treatment of children are uncommon. Dr. Candlish, of Alnwick, thinks the reason for this to be that the majority of pregnant single women repair to the workhouse for their delivery. So also with respect to concealment of birth and infanticide, with the exception of Dr. Hatherley, of Nottingham, and Dr. Thompson, of Bideford, both of whom believe concealment of birth and infanticide to be common in their towns.

To Question V, Dr. Thompson, Bideford, says, "Number large; mortality under the year not striking." Dr. Hatherley, Nottingham, "Number very large." Dr. Candlish, Alnwick, "About 30, most alive." Dr. Aldridge, Dorchester, says "I should judge about 50, of which not more than 20 survived the year." Dr. Heywood Smith, 5, and 1 died. Dr. Brunton, "About 36, but with respect to mortality there is no number given." The returns are, therefore, not sufficiently numerous or complete to modify the

deductions drawn from the former series. The impression, however, left upon the mind by these replies is on the whole more favorable to the prospect of life among illegitimates than that afforded by the former report. The probability, however, is that medical men have but limited opportunities of continuously watching the lives of illegitimates, even of those at whose birth they have assisted, and judging from the recent revelations of the Lambeth Police Court, when once handed over to the maternal care of a baby farmer, at all events in the Metropolitan district, the doctor is not again called in, and but a short period intervenes before the undertaker appears on the scene, and removes, apparently without inquiry, any number of bodies to be buried at his convenience.

The following are the suggestions offered with the object of diminishing infant mortality, and affording greater security to the lives of illegitimates.

Dr. Holman, Reigate.—Better education of parents.

Dr. Armstrong, Gravesend.—The inculcation of a better hygiene; the establishment of well-arranged foundling hospitals.

Dr. March, Rochdale.—The making it illegal desertion of a child to put it out to nurse before it is six months of age, unless good medical reason be given; the establishment of foundling hospitals in all large towns.

Dr. Candlish, Alnwick.—Better hygienic arrangements; official condemnation of unsuitable houses; assistance to mothers towards the maintenance of the child when necessary; and thorough periodic inspection of an appropriate officer.

Dr. Aldridge, Dorchester, suggests "calling attention to the principles of hygiene by popular lectures or the distribution of popular practical tracts among the poor; better cottage accommodation."

Dr. Thompson, Bideford, says, "I think the liability of the mother is not sufficiently enforced, and that it is a great injustice to a woman that this liability should cease in her marriage to another man. This is a great bar to the

marriage of a woman, and renders her impatient of the burden of her infant in many instances."

Dr. Hatherley, Nottingham, urges that the registrar should be strictly prohibited from registering a death of a child under one year without a medical certificate, and that where inquests are held it should be compulsory on the coroner to summon medical evidence; that druggists should be restricted in the sale of patent preparations of a narcotic character; that still-born children should be registered, and where attended by midwives a post-mortem examination made.

Dr. Brunton, London.—Better hygiene and early medical attendance.

Dr. Heywood Smith, London.—The better education of midwives, who should be only allowed to practise when certificated and who should be able to instruct mothers as to the bringing up and rearing of children. The establishment of free depositories for illegitimate children.

It will be seen from this statement of the suggestions made that, as in the former report, so now, they arrange themselves under the two heads of better hygiene and improved legal provisions.

The following is the Code of Rules drawn up by the Committee, and adopted by the Council:

RULES FOR THE GENERAL MANAGEMENT OF INFANTS.

Washing.

Cleanliness is of vital importance to the health of all children.

Healthy infants should have a warm bath night and morning.

The body should be gently cleansed from head to foot with a sponge or flannel, and then quickly dried with a soft warm towel.

After three or four months the heat of the water should be gradually lowered, but it is not advisable to use quite cold water for young children.

Clothing.

The clothing of infants should be light, soft, and warm, and arranged so as not to interfere with the free play of their limbs. All tight bandaging should be avoided.

The common practice of keeping the arms, shoulders, and legs of infants and children bare is hurtful. Children bear cold less well than grown-up people, and should be warmly clad, with the exception of the head.

Ventilation.

Pure fresh air is of extreme importance to children. The rooms in which children sleep should be as airy as possible, not overcrowded, and the windows should be opened freely and frequently.

Sleep.

Unless the weather be very cold, or the child be premature or feeble, it is desirable that it should, from an early period, sleep away from the mother or nurse, in a cradle or cot, care being taken that it is warmly covered.

For the first few months a healthy infant will naturally spend the greater part of its time in sleep.

Up to three years of age a mid-day sleep is beneficial.

In sleeping, as in feeding, regularity is of the utmost importance, and the child should be put to bed at stated times.

Infants should be put directly into their cot or cradle, and not got into the habit of being nursed to sleep in the arms.

All Soothing Medicines, Cordials, Spirits, or Sleeping Drops, should be strictly avoided, as likely to do much harm. Nothing of this sort should be given except under Medical Advice.

Air and Exercise.

In fine weather the child should be taken out at least twice a day, care being taken that it is sufficiently clothed in winter. In warm summer weather the more it is in the open air the better, taking care to protect the head from the sun.

Feeding.

Nothing is more important in the bringing up of children than the careful management of their feeding. Carelessness or errors in feeding cause a large proportion of the illnesses and deaths of young children.

Suckling.

Nature provides breast milk as the proper food for infants, and suckling is by far the best way of feeding a child.

Provided the mother or wet nurse has plenty of milk, and is in good health, the child requires and should have no other food but the breast milk until about the sixth month.

The milk itself, for the first few days, acts as a laxative, and no other aperient is necessary.

Should the formation of the milk be delayed, a little cow's milk, diluted with an equal quantity of warm water, and slightly sweetened, may be given until the mother is ready to nurse.

The child should, for the first six weeks, be put to the breast at regular intervals of two hours during the day. During the night it requires to be fed less often. As the child gets older it does not require to be fed so frequently.

A child soon learns regular habits as to feeding. It is a great mistake, and bad both for the mother and child, to give the breast whenever the child cries, or to let it be always sucking, particularly at night. This a common cause of wind, colics, and indigestion.

How a nursing mother or wet-nurse should be fed.

A nursing woman ought to live generously and well, but not grossly. She may take porter or ale in moderation with her meals. It is a common mistake for wet nurses to live too well, and this often causes deranged digestion in the child.

Should a nursing woman suffer from dizziness, dimness of sight, much palpitation and shortness of breath, or frequent night sweats, it is a sign that suckling disagrees with her, and that she should cease to nurse.

Mixed feeding, when the mother has not enough milk.

When the mother has not enough milk to nourish the child, other food may be given, especially during the night. This should consist of the best milk, with one third the quantity of warm water added.

This plan of combining breast feeding with bottle feeding is better than bringing up the child by hand alone.

Weaning.

The child should not be weaned suddenly, but by degrees, and, as a rule, it should not be allowed to have the breast after the ninth month.

After the child has cut its front teeth it should have one or two meals a day of some light food, such as bread and milk or nursery biscuits, and these may be gradually increased until the child is weaned.

When the child is about from seven to ten months old, according to its strength, it may have one meal a day of broth or beef tea, with crumb of bread soaked in it, or it may have the yolk of an egg lightly boiled.

When it is about a year and a half old it may have one meal a day of finely minced meat; but even then milk should form a large proportion of its diet.

The food of grown-up people bad for children.

Meat, potatoes, and food such as grown-up people eat,

are often given to young infants. This kind of food, and all stimulants, are entirely unsuitable, and are common causes of diarrhœa and other troubles.

Hand-feeding.

If the child must be brought up by hand, the chief rule to remember is, that the food should resemble as closely as possible the milk provided for it by nature.

Milk, and milk only, should be used for this purpose. Cow's milk is generally used, but ass's or goat's milk is good.

Two thirds pure and fresh milk, with one third the quantity of hot water added to it, the whole being slightly sweetened, should be used.

A table-spoonful of lime water may often, with great advantage, be added to the milk, instead of an equal quantity of the warm water.

The milk should be given from a feeding-bottle, which should be emptied and rinsed out after every meal, and the tube and cork, or teats, kept in water when not in use. Perfect cleanliness is most important, otherwise the milk may turn sour and disagree with the child.

The child should be fed regularly, just as if it was suckled; and it is a bad habit to give it the bottle merely to keep it quiet.

The milk diet only should, as a rule, be given until the child begins to cut its teeth, when other food may be gradually commenced, as recommended under the head of "Suckling." When milk is found to disagree, other food should be given under medical advice.

Most of the mortality from hand-feeding arises from the use of arrowroot, corn-flour, and other unsuitable kinds of food, which consist of starch alone, contain no proper nourishment, and should not be used as substitutes for milk.

SUGGESTIONS FOR LEGISLATIVE ENACTMENTS.

The following are the Suggestions of the Committee as to the Changes to be desired in the State of the Law.

The Committee are strongly impressed with the necessity of urging upon the Government some amendments to the existing Laws, and the enacting of other measures for the better protection of Infant Life.

With regard to infanticide, abundance of evidence shows, that at the period of birth the infant can be destroyed by the mother, or by her attendant, with little probability of a conviction; in some few cases a punishment of two years, and that by imprisonment only, is awarded for the concealment of birth. Again, the body of the infant, if not otherwise disposed of by the mother, can be certified by an unlicensed person as having been stillborn, and removed by an undertaker without any question.

The registration of still-births, on the certificate of a qualified medical man or of a licensed midwife, would check a great deal of secret infanticide and criminal abortion. The alteration of the law of evidence with respect to the individual life of the infant would remove a great impediment to conviction. By the present law it is necessary to prove that the child was *entirely separated* from the mother, and *completely born* before its life was destroyed. In a case of suspected infanticide no medical man can swear that the new-born infant was completely separate and born before it was destroyed, even if air be found in its lungs. The case therefore, fails as one of infanticide, the mother either escaping altogether, or being convicted of concealment of birth only. The Prussian Law enacts, that if the infant be killed either *during* or after birth, the crime is infanticide. The Committee therefore recommend that the

English Law should be assimilated to that of Prussia on this point. They also consider that the punishment for infanticide should be made fifteen years' penal servitude, according to the recommendation of the Royal Commission on Capital Punishment. This would be also similar to the Prussian Law.

If the life of the illegitimate infant be preserved until it is a few weeks old, it is usually "put out to nurse," and subjected to a form of infanticide which is very common, and practised by a large class of women termed "baby-farmers." This form of infanticide by slow starvation, and the administration of improper food and drugs, has been lately illustrated by the remarkable case of Mrs. Waters, recently executed for her crimes.

The Committee are of opinion that no woman should take the child of another to her house to nurse for gain unless she be licensed and supervised under the Poor Law or some other authority. Your Committee suggest that the following recommendations should be brought before the Home Secretary by a deputation from the Council of the Society.

Infanticide punishment and evidence amendments.

1. That the punishment for the crime of Infanticide should be by penal servitude for fifteen years, and not by death. This is in consonance with the course recommended by the Royal Commission on Capital Punishment.

2. That whereas it is necessary for the conviction to prove that the child was *completely separated* from the mother prior to its death, it should be sufficient in future to prove that the violence leading to the death of the child was applied *during* its birth, or subsequently to the completion of the birth.

3. That in cases where the mother has been guilty of concealment and the death of the child occurs in consequence of neglect or want of proper attention at the birth, the

punishment awarded on conviction should be penal servitude for two years.

Registration of still-births.

4. That Still-birth should be registered, for which purpose a certificate shall be required either from a medical man or a licensed midwife. In cases where neither is present the Officer of Health or Poor Law Medical Officer should make inquiry, and if he considers it necessary, acquaint the coroner in order that an Inquest may be held.

5. That the Registration of all births should be compulsory. That a copy of the certificate of birth should be given to the parents at the time of the Registration of such birth. That the death of no child under twelve months of age should be registered without the production of the certificate of birth, and that no death shall be registered without the certificate of a medical man.

Education of midwives.

6. That *no person* should be allowed to perform the duties of a midwife or accoucheur unless he or she shall have received proper instruction, and shall have given evidence, before a competent Examining Board, of possessing knowledge and experience adequate to attendance on cases of natural labour.

7. That an Examining Board be forthwith appointed, for the purpose of testing the knowledge of midwives, and for the purpose of issuing certificates of competency.

Boarding-out of workhouse children.

8. That whereas this aggregation of infants and young children in the wards of Workhouses is detrimental to their health, the system of "boarding out" in the families of the working-classes, under proper supervision, be adopted.

Registration of nurses—(baby-farmers).

9. That all persons receiving children to nurse for gain should be registered or licensed, and placed under the supervision of the Poor Law Medical Officers.

10. That whoever takes charge of the child of any wet-nurse should be registered and subjected to the supervision of the same Officers.

11. That a Central Office should be opened in London, where registers of nurses (dry and wet) shall be kept, in order that the public might be enabled to obtain the services of properly registered nurses.

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